

CHANGE SERVICE REQUESTED

December 26, 2008
Volume 30 Number 52
www.processor.com

PROCESSOR

Products, News & Information Data Centers Can Trust. Since 1979

In This ISSUE

COVER FOCUS

Top Issues For 2009

What are the key issues your enterprise data center will be facing in 2009? We talked with some industry experts to find out.

Storage Issues In 2009	1
Security Trends For 2009	9
Outlook On Management	11
Greener & Leaner	12

TECH & TRENDS

Beyond Blades | 1

Blade servers have led the way in high-density systems and have become a favored platform for virtual server deployments. Yet the combination of blades and virtualization is rapidly evolving by incorporating new hardware and software to enable a so-called cloud-like infrastructure.

Improving Your Worth | 22

As each day brings fresh layoff announcements across all industries, IT employees wonder about their own job prospects. Although there are no guarantees in today's economy, IT and data center staff have ample opportunity to tune their career management and maximize their job security.

IT Manufacturers Investing Overseas | 23

Many of the United States' largest technology firms have invested considerable sums overseas to take advantage of a cheaper manufacturing base and a growing technically skilled workforce.

User Account Control Issues | 24

How much control should users have over their own desktops? This is a question that data center admins have been asking.

NEWS

■ **Apple says** CEO Steve Jobs will not deliver the keynote at January's Macworld Conference & Expo**page 4**

■ **After remaining** immune to a national trend of layoffs in other job sectors, the IT industry experienced an employment drop of about 34,000 jobs for November.**page 4**

■ **The White House**, the Department of Commerce, and wireless providers are all opposed to the FCC's proposal to auction off 25MHz of spectrum.....**page 4**

■ **Dell announced a plan** to reduce packaging in its desktops and laptops by as much as 20 million pounds in the next four years**page 12**

■ **Novell has cancelled** its 2009 BrainShare training and discussion conference**page 12**

■ **Intel will manufacture** 32nm chips at the end of next year if production goes according to schedule.**page 24**

■ **The Free Software Foundation**, a group that promotes open-source software, has sued Cisco**page 24**

EACH WEEK

MarketPlace News	4	Opinions	21
Upcoming IT Events	4	How To	25
Products At Work	5	Six Quick Tips	26
Product Of The Week	14	What's Happening.....	27
Product Releases	15	Three Questions	27

The Processor.com home page is updated each week with new articles and hardware news to help you keep current.
Visit www.processor.com today.

Storage Issues In 2009

A Look At What's Ahead, From Technology Strategies To Broader Directions

by Elizabeth Millard

• • •

DATA STORAGE DEMAND is expected to keep increasing over the next year, but as many small to midsize enterprises are already finding, that doesn't mean budgets will expand to include new technology purchases and stronger service offerings.

data for an unspecified amount of time, this type of scalable system that allows for active and archived data to co-exist will be increasingly important.

Unified Storage & Consolidation

According to Chan, another top trend, particularly with a view toward being more



In 2009, storage will have to be affordable as well as effective, and experts believe that SMEs will have to work a bit harder to stretch their dollars. With that in mind, here are some insights into what the next year in storage might bring.

Scalability

Many manufacturers have been doing a better job of making their storage products more scalable, says Stanley Chan, product manager at Sans Digital (626/322-3868; www.sansdigital.com). He expects that this trend will continue and could result in some hybrid type of products that blend different technologies.

For example, some vendors are adding file servers to storage clusters in order to boost the ability to handle active data along with archives. Because some companies are required by law to keep certain types of

scalable, will be unified storage, in which one product, service, or appliance can take the place of multiple systems such as NAS, DAS, and SAN.

"People are finding that one single approach can satisfy most of their needs," says Chan. "You'll see more people looking into that in the next year."

Unified storage systems certainly aren't new, but in budget-conscious times, they could become more prominent. These systems have several advantages, mainly in their monitoring and management capabilities. Thanks to graphics-based tools, data center managers can often have real-time visibility into system performance, allowing them to analyze storage optimization tactics.

Consolidation in general will be crucial in the year ahead, believes Forrester

Go to Page 10

Beyond Blades

New Hardware & Software Technologies Let Enterprises Build Cloud-Like Server Farms

by Kurt Marko

• • •

THE LANDSCAPE FOR INDUSTRY-STANDARD servers has been relatively bland for the last few years, with new products focusing on incremental improvements in performance or density at the same or lower price. Blade servers have led the way in high-density systems and have become a favored platform for virtual server deployments.

Yet the combination of blades and virtualization is rapidly evolving by incorporating new hardware and software to enable so-called cloud-like infrastructure. Research group Gartner has identified 10 strategic technologies and trends to watch in 2009. Among these is the maturation of traditional blades and virtualization that will enable more finely grained provisioning of various server resources, including everything from processors and memory to storage and I/O. Gartner sees a world evolving to "simplify the provisioning of capacity to meet growing needs. The organization tracks the various resource types—for example, memory—separately and replenishes only the type that is in short supply." The benefit is "higher utilization because of lessened 'waste' of resources that are in the wrong configuration or that come along with the needed processors and memory in a fixed bundle."

There are a number of hardware and software trends building the foundation for such utility-like provisioning. While blades and other high-density server configurations are a key element, server virtualization software and new I/O virtualization appliances will also play a major role in delivering on the vision of cloud-like infrastructure.

Server Density Increases

Blade servers have evolved from crude repackaging of standard server motherboards into custom-engineered systems designed to house a variety of processor, storage, and network modules in a compact, easily deployed chassis. State-of-the-art blade chassis host up to 16 half-height blade servers in a 10U system, with each server sporting two quad-core processors. The ability to pack 128 processing cores in a 10U form factor is impressive, yet blades are not the only means to a high-density server farm.

1U server chassis have been a mainstay in most data centers, yet their wide and thin

Go to Page 10

NETWORKING & VPN

DECEMBER 19, 2008

PHYSICAL INFRASTRUCTURE

DECEMBER 5, 2008



I'm InTouch SecurePC & SecureKEY prevent data loss and unauthorized access to your workstations while allowing your employees fast and secure remote control of their computers from anywhere.

(800) 668-2185

www.imintouch.com/secure



Black Box Elite Managed Power Controller provides advanced power and environmental monitoring capabilities.

Horizontal 120-VAC, Single-Circuit, 8-Outlet, 20-Amp (PSH8-S20-120V): \$695

Vertical 120-VAC, Single-Circuit, 20-Outlet, 30-Amp (PSV20-S30-120V): \$1,395

(888) 225-6921

www.blackbox.com/go/EMPC

Protect Your Business Against Data Breaches From Lost Laptops

I'm InTouch SecurePC & SecureKEY

Allowing employees to take company laptops containing confidential information outside the office is a security risk. If the laptop is lost or stolen, the data on the laptop is compromised and could fall into the wrong hands. Instead, use the I'm InTouch SecurePC and keep your data safely behind your corporate firewall.

The SecurePC remote access terminal allows businesses to provide their employees with all the freedom of laptops without the security risks. Instead of storing their work on a laptop, employees can use the SecurePC to remotely control their office workstation from anywhere over the Internet using 01 Communique's I'm InTouch Premium remote access solution. No files can be saved to SecurePC, ensuring no data leaves the safety of the corporate network.

For even more security, add the SecureKEY physical authentication USB device to prevent

unauthorized remote access to company workstations. Only a computer with an employee's personal SecureKEY inserted into its USB slot can be used to remotely access the employee's workstation in the office. Even if the employee's remote access login password were compromised, unauthorized access would not be possible because the SecureKEY would not be present.

By combining the SecurePC, SecureKEY, and I'm InTouch Premium solution, businesses can deploy an incredibly secure remote access platform quickly and cost-effectively, without any performance sacrifices.



Remotely Monitor, Control & Report Power

Black Box Elite Managed Power Controller

With today's skyrocketing utility bills and the higher energy consumption caused by ever-increasing computing power demands and server density, you can't afford not to keep a close eye on power usage in your data center—particularly after hours.

The Elite™ Managed Power Controller from Black Box provides advanced power monitoring and environmental monitoring capabilities. It not only distributes power to your equipment, it also enables you to *continuously* monitor circuit status, voltage supply, and current. Use it to measure and record kilowatt hour draw and to monitor individual outlet usage as well.

You can even check power and temperature levels remotely to pinpoint peak levels in data centers. Then you can remotely switch power on and off to individual outlets or groups of

outlets, enabling you to selectively power down unused equipment to conserve power.

To conserve energy in your data center at certain times of the day, just set up time-delayed or scheduled shutdowns. You can use the controller to turn off unused equipment during off hours and restart in the morning or when needed. It's an inexpensive, simple way to be "green."

With additional features such as message notification, advanced circuit breaker protection, report generation, four levels of access, customizable alarms, and automatic load shedding, the Elite Managed Power Controller from Black Box takes power management to the next level.



SERVICES

DECEMBER 19, 2008

Extensive Inventory Of Obsolete Components

IGS Refurbished DEC Parts, Products & Systems

IGS is the world's largest independent remanufacturer and source of supply, service, and depot repair of Digital Equipment Corp.® parts, products, and systems.

At IGS we maintain an extensive inventory of DEC parts and equipment. Some date from as far back as the '60s, but we also support products manufactured as recently as last year. We refurbish and service these parts, adding current technology when applicable. Our multimillion-dollar inventory, coupled with our worldwide sourcing expertise, enables us to fulfill your requirements rapidly and cost effectively.

You can't afford anything less than zero defects, and neither can we. That's why we maintain the most advanced test equipment and thoroughly test every part before shipment. Our approach to customer satisfaction is straightforward: We provide quality products, on time, at highly competitive prices, coupled with unparalleled service.

We provide Advance Replacement Service within 24 hours if we have the item in stock, and with 75,000 stock items, chances are we will. That stock includes an unmatched inventory of parts and components, right down to assembly-level devices.

- IGS offers:
- Refurbished and remanufactured hardware and software
 - Repair/exchange services
 - End-of-life support
 - VAX/Alpha servers and workstations
 - Migration services, including VAX to Alpha, VMS to NT, Alpha to Intel, and Alpha/NT to Alpha/Linux
 - Enterprise computing services
 - Storage area network
 - Design, configuration, and integration
 - Enterprise backup and storage management
 - VMS Cluster design and implementation

IGS offers parts, service, and repair for DEC components and systems.

(508) 866-1171 ext. 235

www.decparts.com



PROCESSOR

The Same Great Product News & Information

Available In Print & Electronic Versions!



[Read This Week's Issue Online](#)
[View This Week's Issue as a PDF](#)
[Search Past Articles](#)



Jobs Won't Deliver Macworld Keynote

Apple says CEO Steve Jobs will not be delivering the keynote at January's Macworld Conference & Expo. Apple also is reportedly pulling out of the conference after 2009, as trade shows have become a minor part in Apple's efforts to reach customers. Apple says the decision is based on the popularity of its retail stores and Web site, which pull in significantly more customers than do trade shows. The disappearance of Jobs at the Macworld show will likely be a disappointment for many attendees, as many Apple consumers and fans have been waiting to hear one of Jobs' "Stevenotes." Standing in Jobs' place will be Philip Schiller, Apple's senior vice president of worldwide product marketing.



IT Jobs Heading Overseas

Large firms—those with a minimum of \$5 billion worth of revenue—are increasingly turning to offshore outsourcing to satisfy their IT needs, according to a study by the Hackett Group consulting firm. The firm says that about a quarter of IT, finance, HR, and related positions in the United States (as many as 350,000) could be lost by 2010. Long-term, Hackett Group estimates show that number could approach 80%. This information comes from a survey done in October that involved 200 firms in the United States and Europe.

U.S. IT Employment Sinks; New Hiring To Slow

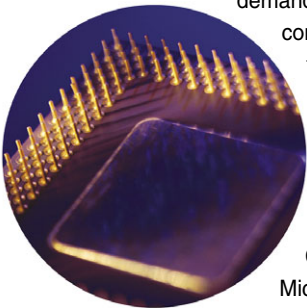
After remaining immune to a national trend of job layoffs in other job sectors, the IT industry experienced an employment drop of about 34,000 jobs for November, according to the NACCB (National Association of Computer Consultant Businesses). Despite the hiring drop, employment within the U.S. IT sector remained 2.1% ahead of November 2007, though the NACCB indicates there are now fewer than 3.9 million U.S. IT jobs. A Dice.com survey of 1,000-plus managers and job recruiters in November, meanwhile, indicates "7 in 10 recruiters and hiring managers are curtailing hiring plans for the next six months" for tech professionals. Of those surveyed, 32% indicate they'll cut back substantially on hiring, 40% will slightly pull back, and 22% won't scale back. Slightly less than 50% indicate layoffs are likely or very likely in the next half year. About 70% more candidates are applying for jobs compared to a June Dice.com survey, and 22% of respondents state no urgency to fill open positions (compared to 17% in June), and 52% reported slight caution (vs. 39%).

Group Names Top Vulnerable Consumer Apps

Mozilla Firefox, Apple iTunes, Skype, and Microsoft Windows Live Messenger are all among the top 12 applications on Bit9's annual list of "popular consumer applications with known security vulnerabilities" often "running outside of the IT department's knowledge or control." Bit9, an enterprise application white-listing company, released the list as part of its "2008's Popular Applications With Critical Vulnerabilities." Because of increased vulnerabilities and the popularity of many consumer apps, Bit9 increased the annual list from 10 to 12 apps. For consideration, apps must run on Windows, be well-known among consumers, be frequently downloaded by individual users, not be classified as malicious, contain at least one critical vulnerability reported during the year, and be registered in the U.S. National Institute of Standards and Technology's vulnerability database.

Chipmaker Revenue Forecasts Dreary

Dim revenue forecasts from chipmaker giant Texas Instruments and falling revenue and forecasts across the industry may portend frozen analog and wireless chip markets. Texas Instruments cut current-quarter revenue projections 19%, from between \$2.83 billion and \$3.07 billion to between \$2.3 billion and \$2.5 billion. Warnings of waning phone demand from Nokia, the company's top customer, lowered analyst expectations, but the size of Texas Instruments' cut still came as a shock. Chipmakers ST-Microelectronics NV, Infineon Technologies AG, and National Semiconductor also lowered forecasts. National Semiconductor Q2 profit dropped about 60% from Q1, and it projects a 30% decline in current quarter sales, citing low post-holiday-season demand for personal mobile devices as a factor in its outlook. Both Texas Instruments and National Semiconductor plan to decrease manufacturing and cut costs in the near term.



company's top customer, lowered analyst expectations, but the size of Texas Instruments' cut still came as a shock. Chipmakers ST-Microelectronics NV, Infineon Technologies AG, and National Semiconductor also lowered forecasts. National Semiconductor Q2 profit dropped about 60% from Q1, and it projects a 30% decline in current quarter sales, citing low post-holiday-season demand for personal mobile devices as a factor in its outlook. Both Texas Instruments and National Semiconductor plan to decrease manufacturing and cut costs in the near term.

Alcatel-Lucent To Cut 1,000 Jobs

Alcatel-Lucent announced Dec. 12 that it will cut 1,000 white-collar jobs, or about 1.3% of its global work force, as part of CEO Ben Verwaayen's plan to return the company to profitability. Shares fell, however, as investors had expected a more fundamental restructuring of the company's business plan. The Paris-based telecommunications equipment maker has lost about \$7 billion since the merger of Alcatel SA and Lucent Technologies in 2006 and has posted seven straight quarters of losses. The cuts, which will also eliminate 5,000

contractor jobs, are aimed at saving \$991 million by the fourth quarter of next year.

Open Handset Alliance Gains 14 Members

Those looking for additional applications and improvements for the Android operating system got some good news when new members joined the Open Handset Alliance. New members include AKM Semiconductor, Asustek Computer, Atheros Communications, Ericsson, Garmin International, Huawei Technologies, and Sony Ericsson. According to the Open Handset Alliance, the new members will deploy compatible Android devices, contribute significant code to the project, or support the ecosystem for the products and services of Android-based devices. In particular, the addition of Sony Ericsson and Garmin provide important device avenues for the Android platform.

Netbooks Overcome Economic Slump

A study from DisplaySearch found that sales from netbooks grew by 160% from the second to third quarter. The study noted that netbooks have been around for a while, but it was the inexpensive Eee PC from Asus that spurred growth in the market. DisplaySearch also found that Acer surpassed Asustek in the third quarter to become the top netbook manufacturer. Acer held 38.3% of the market, and Asus followed at 30.3%; HP placed a distant third at 5.8%. Of the top 10 PC manufacturers, only Apple has chosen not to enter the netbook market.

Decision Postponed On Free Wireless Proposal

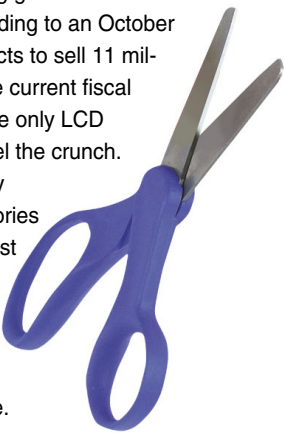
The White House, the Department of Commerce, and wireless providers are all opposed to the FCC's proposal to auction off 25MHz of spectrum in the 2,155 to 2,180MHz band. The winner would be required to offer some airwaves as free wireless Internet access, supported by ads. The White House wants the airwaves auctioned without price or product mandate, while wireless providers are concerned about a lack of competition and interference with their paid networks. A Dec. 18 meeting to consider the proposal was canceled after a request from Democratic lawmakers for the FCC to focus on the digital television transition.

RIM To Buy Application Company

Research In Motion, maker of the BlackBerry, plans to acquire Chalk Media for about \$19 million, pending shareholder approval. Chalk Media is best known for its Mobile Chalkboard utility, which lets organizations generate and deliver audio, video, and animation content to BlackBerry users. Mobile Chalkboard also lets end users provide feedback on the content and subscribe to video and audio podcasts. At least 75% of Chalk's shareholders must approve of the acquisition; the vote is expected in January. RIM plans to loan Chalk about \$1.8 million to pay operating costs until the deal goes through.

Sharp Cuts LCD Plants & Jobs

Following Sharp's dire predictions from November, the company announced it plans to close two Japan-based LCD panel manufacturing plants in January. The firm also plans to cut its personnel by 380 temporary workers, all in response to slowing global demand for LCD panels. According to an October report, Sharp expects to sell 11 million LCD TVs in the current fiscal year. Sharp isn't the only LCD manufacturer to feel the crunch. LG Display recently announced its factories would operate at just 80% of full capacity until the end of the year as average selling prices fall by 20% or more.



WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 14 major companies in the technology market.

Company	Symbol	Year Ago	Dec. 12 \$	Dec. 18 \$	% change from previous week
AMD	AMD	\$7.68	\$2.28	\$2.23	▼ 2.19%
Computer Associates	CA	\$25.64	\$17.45	\$17.40	▼ 0.29%
Cisco Systems	CSCO	\$28.15	\$16.99	\$16.66	▼ 1.94%
Dell	DELL	\$24.02	\$11.48	\$11.36	▼ 1.05%
Google	GOOG	\$673.35	\$315.76	\$310.28	▼ 1.74%
HP	HPQ	\$51.02	\$35.97	\$35.37	▼ 1.67%
IBM	IBM	\$106.31	\$82.20	\$84	▲ 2.19%
Intel	INTC	\$25.91	\$14.75	\$14.26	▼ 3.32%
McAfee	MFE	\$37.67	\$29.50	\$32.94	▲ 11.66%
Microsoft	MSFT	\$34.74	\$19.36	\$19.30	▼ 0.31%
Oracle	ORCL	\$21.25	\$16.84	\$16.61	▼ 1.37%
Red Hat Software	RHT	\$18.35	\$11.65	\$11.84	▲ 1.63%
Sun Microsystems	JAVA	\$19.13	\$4.09	\$4.13	▲ 0.98%
Symantec	SYMC	\$16.46	\$12.49	\$13.16	▲ 5.36%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Upcoming IT Events

Are you looking to learn more about data center or IT topics? Network with some of your peers? Consider joining a group of data center professionals. If you don't see a meeting listed in your area, visit www.afcom.com, www.aitp.org, or www.issa.org to find a chapter near you.

- JANUARY -

Storage Visions 2009 Conference

Jan. 6-7
Las Vegas, Nev.
www.storagevisions.com

• • • • •

AITP Washington D.C.

Jan. 8, 6:30 p.m.
Alfio's Restaurant
4515 Willard Ave.
Chevy, Md.
aitpwashdc.ning.com

• • • • •

AITP Chattahoochee Valley

Jan. 15, 12 p.m.
Columbus Regional Library
3000 Macon Road
Columbus, Ga.
www.cvcaitp.org

• • • • •

AITP Omaha

Jan. 15, 5:30 p.m.
Seraph Corp.
Omaha, Neb.
www.aitpomaha.org

• • • • •

ISSA Upstate SC

Jan. 16, 11 a.m.
NuVox
301 N. Main St., Suite 5000
Greenville, S.C.
www.upstate-issa.org/index.htm

• • • • •

AITP Pittsburgh

Jan. 19, 6 p.m.
Sokol Club-Southside
2912 E. Carson St.
Pittsburgh, Pa.
www.aitp-pgh.org

• • • • •

Oklahoma City AITP Chapter

Jan. 20
Oklahoma City, Okla.
www.aitp.org/organization/chapters/chapterhome.jsp?chapter=40

• • • • •

Florida Educational Technology Conference

Jan. 21-24
Orlando, Fla.
www.fetc.org

• • • • •

Gartner CIO Leadership Forum

Jan. 25-27
Palm Springs, Calif.
www.gartner.com/it/page.jsp?id=770919

• • • • •

ISSA Des Moines

Jan. 26, 11:30 a.m.
1401 50th St., Suite 200
West Des Moines, Iowa

• • • • •

AITP Akron

Jan. 27, 6 p.m.
Lindsay's Amber Restaurant
1500 Canton Road
Akron, Ohio
www.akron-aitp.org/index.htm

• • • • •

ISSA Baltimore

Jan. 28, 4:30 p.m.
Sparta Inc.
7110 Samuel Morse Drive
Suite 200
Columbia, Md.
www.issa-balt.org

- FEBRUARY -

AFCOM St. Louis Gateway

Feb. 9
Schneider Electric Technology Center
807 Corporate Centre Drive
O'Fallon, Mo.
www.afcom.com/afcomnew/stlouis.html

• • • • •

AFCOM St. Louis "Gateway" Chapter

Feb. 10
Schneider Electric Technology Center
807 Corporate Centre Drive
O'Fallon, Mo.
www.afcom.com/afcomnew/stlouis.html

• • • • •

Greater Kansas City AFCom

Feb. 10
Cerner Corp.
3200 N. Rockcreek Parkway
Kansas City, Mo.
www.greaterkc-afcom.com

PRODUCTS AT WORK

All-In-One Appliance Prevents Network Management Ills

SevOne Performance Appliance Solution Tracks A Range Of Network Hardware

by Sue Hildreth
• • •

SYSTEM MONITORING AND MANAGEMENT software is invaluable in keeping track of system performance and events. But IT shops with multiple vendors' equipment often find they must implement multiple monitoring packages, as well. That's especially the case when companies acquire other firms with completely different IT hardware.

That was a situation that Jay Scott, performance engineer at Alere Medical (formerly Matria Healthcare), based in Marietta, Ga., wanted to avoid. Not only did the then-Matria Healthcare organization have different platforms within its own operations, but it was at the beginning of a merger with Inverness Medical Innovations, headquartered in Waltham, Mass., which in turn had also just acquired two other companies only a few months before.

All that merging meant that the IT departments of all of these healthcare organizations would be doing a lot of integrating, consolidating, and merging of their own. So when Scott began looking for a network monitoring package, he was hoping to find something that was not proprietary to just one vendor's platform.

A Unified Solution

After considering a couple of other potential solutions, Scott heard about SevOne's PAS (Performance Appliance Solution) system (www.sevone.com), a network and application performance management appliance with the software built into the unit. The idea behind PAS was to provide an all-in-one box that could monitor a range of network elements from different vendors and present the information in a single view. PAS relies on open APIs to import third-party data into its monitoring dashboard.

Being an appliance, it spares the customer the need to buy both hardware and software and then configure the system. PAS can be set up relatively quickly—within a day—to begin populating the database with network elements, and it features an autodiscovery function that seeks out and returns a list of the elements it finds on

a network. The administrator then turns off any that he doesn't want to monitor.

"It's clean and easy to configure," says Scott. "You just put in a couple of pieces of information and launch the discovery function."

That is more simplified than many other system management applications, says Scott, which require more data input and have a more complex interface for turning elements on and off. The autodiscovery function automatically collects data on up to 20,000 elements, saving Alere's IT staff the job of manually discovering and inputting element data.

SevOne's PAS uses SNMP to track device or element variables and flow-based technologies, such as NetFlow, to track application utilization, performance, and traffic patterns.

Scott was also considering adding a platform-specific management application just for the CA systems but found that PAS was able to monitor much of what he has intended to track in the other application.

This all-in-one capability to monitor a variety of different vendors' network components has saved the IT staff time and money, claims Scott, noting that he can quickly drill down on problems in the network by simply clicking elements displayed in the interface to get more information.

"The reporting side was the big selling point," says Scott. "I can pull up a status view of a router or switch, take a cursory glance at what I see, and then directly click on a particular device I want to get more information on. I can continue to drill down on the report data. With another performance monitoring solution, I'd have to run three or more reports to find what I was looking for. I'd run one report, then if I found something I wanted to look at further, I'd have to go write and run another report on that, and so on."

That would consume a lot of time, he notes, considerably lengthening the time required to solve a problem on the network.

Now, with SevOne, he can get follow-up information much more quickly, he says.

"If I want to run a report on bandwidth utilization against everything we have in the system, it now takes me 10 or 15 minutes if it's a large report. But that same report in a monitoring application . . . would be scheduled as an overnight run and would take eight to 10, even 12 hours to run. That means you're just waiting for your report all that time," says Scott.



Scott says that the drill-down capability of the interface, along with the rapid reporting features and autodiscovery configuration, has saved Alere considerably in IT labor costs—as much as 50% in IT administrative costs since it was implemented in late 2007.

It has also been a cost-saver in that PAS includes all features in the standard unit—customers don't purchase multiple add-ons for extra functionality, as is often common with large performance management suites from major vendors.

"Here I'm dealing with one piece of hardware and one maintenance item, and it has all of the functionality in one product," he says. "If I'm buying a license from [another company], I have to buy this kind of element license and that element license and this server license—it gets to be a complex negotiation and a royal pain for accounting to deal with."

Managing For Availability & Performance

Alere Medical has facilities in several locations around the country, including IT offices in Marietta, Ga., and in Chicago. Scott installed four PAS boxes, two in Chicago and two in Marietta, to provide redundancy and rapid disaster recovery. An administrator can access network data from the standby appliances as well as the production appliances, and the Chicago site is configured to automatically take over should the two units in Marietta fail or if the data center there goes down.

"I've got an automated failover scenario. If I lost my Marietta data center, the Chicago site will become active and resume polling. With other products, you often have to replicate the data at certain times and usually face some sort of data loss, whether it's hours' or minutes' worth."

The additional units also serve as spare processing power, says Scott, which will ensure high availability and performance as the network expands and more elements are monitored. The PAS units currently have a capacity of up to 20,000 elements—an upgrade from the 10,000-element versions that Alere first sampled during the evaluation. That extra space will be needed as Alere continues to merge the networks of the newly purchased organizations.

Using SevOne will, Scott hopes, make integration easier because the one monitoring solution can track different types of equipment. That will presumably eliminate the need to buy different monitoring packages or migrate entire IT shops to completely different platforms.

"I'll be adding a number of users, integrating hardware, and adding a number of devices to the system," says Scott. "PAS should reduce the need to have to change out any of their hardware." ■

SevOne Performance Appliance Solution

PAS is an appliance that monitors and reports on network events. It uses open APIs to import data from different vendors' equipment into its database and displays the information on a graphic Web interface.

"The reporting side was the big selling point," says Alere Medical's Jay Scott. "I can pull up a status view of a router or switch, take a cursory glance at what I see, and then directly click on a particular device I want to get more information on. I can continue to drill down on the report data."

(302) 368-5650
www.sevone.com

Attention Data Center Professionals

Where do you go to find the newest products available?

Check out each week's issue for . . .

Articles with
valuable product
overviews and data.



. . . then go to Processor.com and take advantage of our online search tools to find even more in-depth information!

Product Releases

Carrier Links
If Sprint's new 3G network is to live up to its name, it will need to be able to handle the high speeds of 3G. Sprint's new 3G network is designed to handle speeds of up to 3.1 Mbps. This is a significant improvement over the 2.4 Mbps of 3G. Sprint's new 3G network is designed to handle speeds of up to 3.1 Mbps. This is a significant improvement over the 2.4 Mbps of 3G.

Microsoft To Keep Windows 7 Close
Microsoft is keeping Windows 7 close to its chest. The company is not planning to release Windows 7 until it is ready to compete with Windows XP. Microsoft is keeping Windows 7 close to its chest. The company is not planning to release Windows 7 until it is ready to compete with Windows XP.

Microsoft To Keep Windows 7 Close
Microsoft is keeping Windows 7 close to its chest. The company is not planning to release Windows 7 until it is ready to compete with Windows XP. Microsoft is keeping Windows 7 close to its chest. The company is not planning to release Windows 7 until it is ready to compete with Windows XP.

Microsoft To Keep Windows 7 Close
Microsoft is keeping Windows 7 close to its chest. The company is not planning to release Windows 7 until it is ready to compete with Windows XP. Microsoft is keeping Windows 7 close to its chest. The company is not planning to release Windows 7 until it is ready to compete with Windows XP.

MarketPlace ads filled with in-depth information on new products.

Quick rundowns of all new data center-related products released in the past week.

Xenon Enterprise Server

The Xenon Enterprise Server is a server-based information system designed to give you the ability to manage your information in a secure, scalable, and efficient manner. The Xenon Enterprise Server is a server-based information system designed to give you the ability to manage your information in a secure, scalable, and efficient manner.



DNF Security JetX portable surveillance systems are designed for use in rugged environments.

Starts at \$7,336 for an entry-level system with single display

(800) 947-4742

www.dnfsecurity.com

Portable Surveillance Gets Rugged

DNF Security JetX

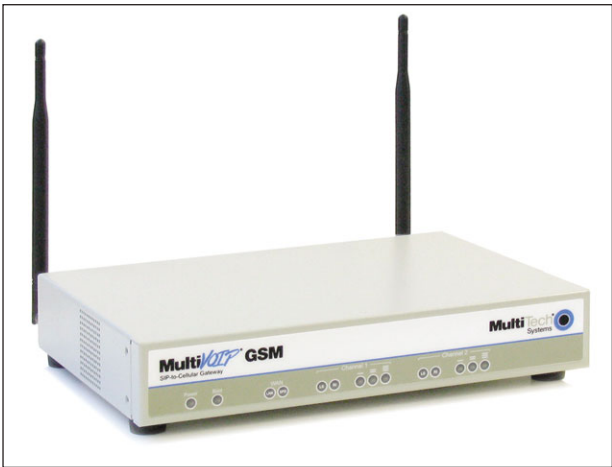
Portable surveillance is a powerful way to maintain security in rough environments. Whether it's a construction site in a remote location or the scene of an emergency, portable surveillance provides crucial help when it's needed most. DNF Security's JetX surveillance solution is ideal for mobile, offsite monitoring and recording.

The series of devices includes three models with rugged systems designed to work in severe conditions with no interruption. The units each have one 15-inch or three 17-inch high-resolution LCD displays and an open platform for better compatibility with equipment such as cameras and video management software.

The triple-screen systems support up to 3TB of storage. All JetX

systems feature a built-in high-resolution display, integrated keyboard and touchpad, and a rolling carrying bag.

The JetX M-Powered product features a battery-powered system designed to provide long-lasting power in off-road applications and is also available in hybrid editions. The hybrid editions support up to 32 analog and eight IP cameras. Single-display JetX systems feature 2TB of internal storage capacity and a dual-core Xeon processor.



Multi-Tech Systems
MultiVOIP® GSM
SIP-to-cellular gateway makes all calls local calls.

MSRP \$999

(800) 328-9717

www.multitech.com

International Tariff-Free Cell Calls

Multi-Tech Systems MultiVOIP GSM

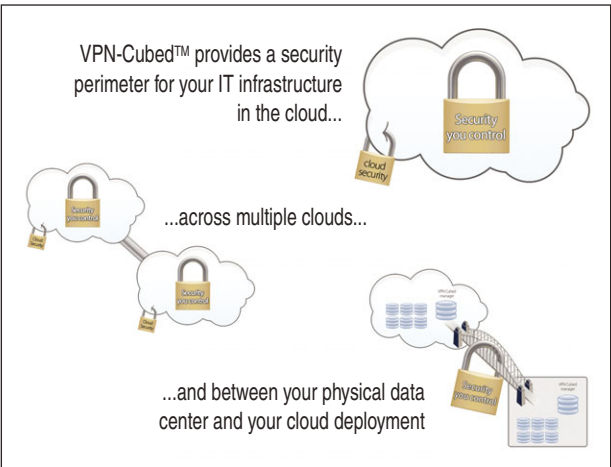
Multi-Tech Systems' two-channel MultiVOIP GSM SIP-to-Cellular gateway routes calls from SIP end points on a VoIP network to locations outside the VoIP system through cellular network instead of the PSTN line.

By routing voice calls between cellular GSM and SIP-based VoIP networks, organizations see substantial savings for long distance calls. The new gateway makes the whole world a local call and also provides a backup connection to remote VoIP sites in case of external Internet failure. A MultiVOIP GSM gateway maximizes an organization's investment in current telephony equipment and infrastructure.

MultiVOIP GSM units equipped with GSM cellular service are placed at facilities worldwide. Calls can be sent to any of those locations using a VoIP network and sent locally to a cell phone over the GSM network.

The new gateway, Model MVPGSM-2, comes with two ports for communicating over a SIP-to-cellular connection and an Ethernet interface for connecting to an IP network. SIP-IP network ends are connected at desired locations using the Ethernet interfaces. The cellular interface of each MultiVOIP GSM is connected to a GSM network by one or two user-supplied SIM cards. IP PBXes also connected to the same IP network are then able to utilize the MultiVOIP GSM to complete calls over the cell networks.

Routing rules decide where calls go. With routing rules, a caller in one country can call a cell phone in another country without incurring toll charges. Calls can originate or terminate from an IP PBX handset, PSTN line, or cell phone.



CohesiveFT's VPN-Cubed™ enables customer-controlled security in a single cloud, across multiple clouds, and between the physical data center and the cloud.

Ranges from \$25,000 to \$50,000

(866) 341-3722

www.cohesiveft.com/vpncubed

Your Bridge To Confident Cloud Computing

CohesiveFT VPN-Cubed

Today, clouds are secured by cloud providers. In addition to the cloud vendor's VLAN and individual virtual server firewalls, CohesiveFT VPN-Cubed™ helps customers augment key compliance and governance requirements with a layer of security within their control.

The VPN-Cubed commercial offering enables customer-controlled security in a single cloud, across multiple clouds, and between the physical data center and the cloud.

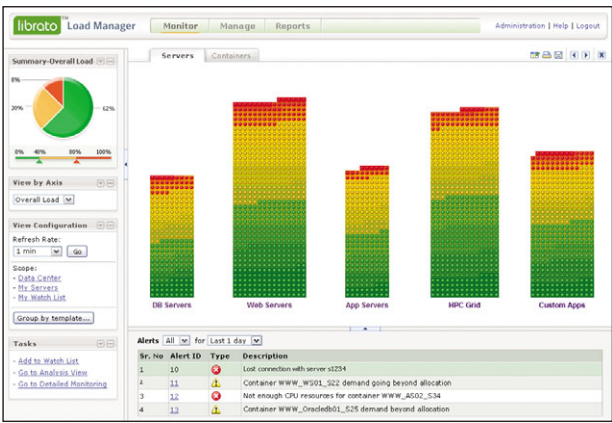
Using an encrypted VPN (virtual private network) specifically developed for use in cloud environments, CohesiveFT helps establish a secure bridge between a company's private infrastructure and the cloud.

With VPN-Cubed, organizations can leverage the cloud for redundancy, cross-cloud failover,

and scalability during critical transitions whether scaling up to grow the business or scaling down to cut costs.

CohesiveFT offered a precursor to the VPN-Cubed offering in production for more than a year via the Open Source VcubeV® project. VPN-Cubed is available now as a packaged service. The basic service is available for use with most operating systems, virtual environments, and third-party cloud offerings. Implementations will vary based on a customer's unique topology.

For more information, contact sales@cohesiveft.com.



Librato Load Manager is a workload management solution that monitors and controls server resources.

(408) 588-1716

www.librato.com

Server Consolidation Without Compromise

Librato Load Manager

Librato Load Manager is a workload management solution that helps customers deliver predictable application performance and optimal system resource utilization for x86 platforms on physical or virtual servers. Load Manager guarantees server resource utilization independently across CPU, memory, storage I/O, and network I/O, which enables customers to run more applications on fewer servers without compromising business goals.

Load Manager allocates system resources via a policy-based scheduler to ensure optimal performance and service level. By maximizing server utilization and delivering application quality of service, Load Manager results in fewer servers, fewer operating systems, less complexity, and guaranteed service level agreements. By dynamically assigning unused capacity, Load Manager dramatically increases server utilization, enabling organizations to get the most out of existing

resources. Load Manager typically uses less than 1% overhead and requires no OS or application modifications.

Load Manager supports Linux and Windows Server 2003 and 2008. The solution's demand-monitoring capabilities provide an advanced level of capacity planning. In addition to allocating system resources to an application and measuring actual resource consumption (load) over time, Load Manager can also be used to project how much resource an application would have consumed (demand) had it not been limited by its allocation. This ability to determine the difference between load and demand provides organizations with a powerful tool for planning server capacity.





eEye Retina OnDemand is a SaaS security vulnerability management package offering rapid deployment of Retina Security Management appliances.

(866) 339-3732

www.eeye.com



Security Vulnerability Management

eEye Retina OnDemand

As companies continually enhance, tweak, and shore up security, one crucial area that IT administrators focus on is vulnerability management. eEye's Retina Enterprise scanning package offers a SaaS model to deliver proactive security measures that can be deployed without the need for customers to manage software or agents within their infrastructure.

Retina OnDemand is designed to simplify the vulnerability management process by offering companies rapid deployment of Retina Security Management appliances and the ability to scan results, schedule, and report with a standard Web browser. Users don't need to set up servers, configure databases, or install software. Retina OnDemand is black box technology that can be plugged in to a company's environment for

a hands-free approach to management and regulatory compliance.

By leveraging Retina's fully preconfigured 651 Security Management Appliance, users can perform a full scan, review results, generate reports, and download information to tools such as Microsoft Office and Adobe Acrobat after turning on the unit and logging on to their company's eEye account.

The Retina 651 Security Management appliance is designed to meet PCI, FDCC, SANS, HIPAA, Sarbox, and GLB internal scanning requirements. To use Retina OnDemand, users need only outbound ports to communicate with eEye; no inbound ports or IP addresses need to be added to a company's firewall.



iQstor iQ2850 supports up to 15 drives, with scalability up to 240TB.

\$33,100 for the iQ2850 with 15TB SATA capacity and unlimited license for snapshot, volume copy, and remote replication

(805) 376-1000

www.iqstor.com



Simple & Cost-Effective Storage

iQstor iQ2850 iSCSI

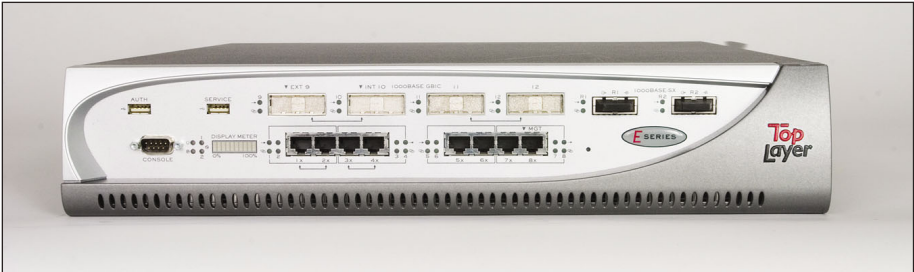
As companies grow and change, their storage needs also change. Storage can be complicated as companies migrate data to new platforms, develop remote data centers, and simply outgrow their old storage solutions. iQstor's iQ2850 storage system is designed to offer companies a scalable, feature-rich storage solution to fit the performance and reliability needs of current applications.

Designed to offer all the increased storage utilization, managed data protection, and automated storage provision-

ing benefits of a SAN, the iQ2850 is an intelligent yet cost-effective all-in-one storage system, giving data center managers the ability to optimize storage quickly and cost-effectively.

Features include the ability to implement a large, tiered IP SAN storage system with support for up to 15TB with 1TB SATA drives, expandable up to 240TB. RAID controllers, power supplies, cooling modules, and disk drives are hot-swappable.

Despite the enterprise-level capabilities of the iQstor iQ2850, it's designed to be a low-cost and simple storage system, ideal for companies that need to consolidate multiple servers without the need for specialized host adapters, switches, and cables. Other benefits include integrated data protection features such as volume manager-based storage virtualization, snapshot, mirroring, remote replication, policy-based storage provisioning, capacity expansion, and remote support. Supported platforms include Microsoft Windows, VMware and Linux.



Top Layer IPS 5500 E-Series offers defense-in-depth protection with new shunning features for blocking traffic.

Starts at \$15,000

(508) 870-1300

www.toplayer.com

Shunning Botnets & Rate-Based Attacks

Top Layer IPS 5500 E-Series

Fighting malware such as botnets and other rate-based attacks is a top priority for every company. Top Layer Security offers its latest solution for warding off attacks with the Top Layer IPS 5500 E-Series, a family of products that offer defense-in-depth protection.

The IPS 5500 E-Series has new shunning features designed to provide companies with techniques to support the device's automated attack defense. These include the ability to quickly temporarily or permanently reject traffic from IP addresses suspected of originating or being related to an attack. The new features are designed to help companies interactively identify current attackers and then shun attack traffic.

The IPS 5500 E-Series also includes a new user interface with dashboards designed to allow Security Operation Center personnel to

quickly switch between "quiet-time" monitoring and "under siege" incident response. Other new features include attack source identification, malicious IP address shunning, and additional router protection.

With malicious IP address shunning, users can set time periods for how long each address should be shunned and manually unshun addresses that are determined safe. With additional router protection, users can export a list of IP addresses being shunned so that they can be imported into a router for blocking by the router. The new features are included in version 5.2 of the IPS 5500 E-Series software.



Data Center Cooling Solution

Simplex Isolation Systems AirBlock

Data centers must be kept cool to achieve maximum operating efficiency and ensure against disastrous malfunction, computer crashes, and loss of data. Unwanted mixing of warm air and cold air is one of the key factors contributing to energy waste.

That's why data centers need a way to reduce data center cooling costs by directing cold air where it is needed most—through the computer racks. AirBlock curtains and strip doors from Simplex separate cold air and warm air aisles, maximizing the dynamics of airflow to cool your data center. A system can pay for itself in months.

- Save energy on both air conditioning and fan systems—15% and 67%, respectively, according to a study by the Lawrence Berkeley National Laboratory.
- The AirBlock product line includes transparent curtains, strip doors, panels, and patented hardware, letting you create a solution specific to your needs.
- Specially formulated vinyls are low-outgassing and antistatic and meet ASTM and NFPA fire retardancy requirements.
- Hardware is also designed so curtains fall away in the case of fire, allowing fire sprinklers full operating range.

Simplex also manufactures hardwall systems with rigid, transparent panels, offering even more containment and greater ability to direct cool air. All Simplex products and systems are designed to meet ASTM and NFPA fire retardancy requirements.

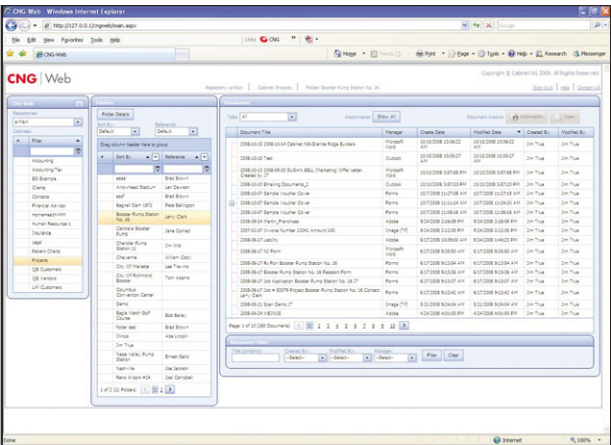


Simplex Isolation Systems AirBlock curtains and strip doors separate cold and warm air aisles, maximizing airflow.

(800) 854-7951

www.SimplexIsolationSystems.com

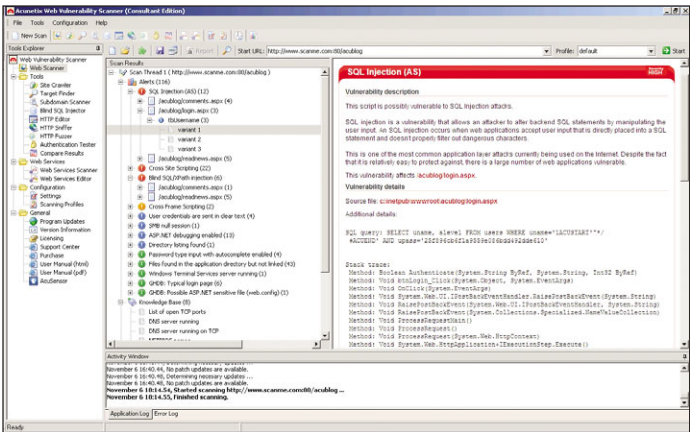




Cabinet NG's CNG-WEB provides instant and secure access to clients files.

(256) 258-0460

www.cabinetng.com



Acunetix Web Vulnerability Scanner v6.0 performs automated scans and displays vulnerabilities found.

Small Business edition starts at \$1,445; free version available

(888) 593-5285

www.acunetix.com

Access Essential Business Documents

Cabinet NG's CNG-WEB

Cabinet NG's CNG-WEB lets users easily access essential business documents anywhere, anytime using a standard Web browser. This extends the security of CNG-SAFE, Cabinet NG's Shared Access Filing Environment, to let users safely access and search cabinets and folders and view and print documents from virtually any location.

CNG-WEB is an easy-to-use and economical online extension of a small enterprise's document management system. The system automatically enforces security and controls access rights for all users. Files and folders are only accessible by authorized users.

CNG-SAFE's automated document management platform gives businesses all they need for electronic document management in a single package—advanced data protection, state-of-the-art user interface, and the ability to integrate with most third-party applications.

Small enterprises can replace paper and boost accessibility and insight with automated electronic workflows that streamline internal processes, making filing, locating, and sharing documents simple, seamless, and secure.

CNG's user-friendly document management solutions streamline user tasks, delivering gains in office productivity and bottom-line savings. By creating a secure electronic filing environment, CNG's products move manual paper-based procedures into efficient automated workflow processes. CNG integrates document management with popular business applications, creating a central repository of business information that powers more effective business processes.



Is Your Web Site Hackable?

Acunetix Web Vulnerability Scanner

Web site security is possibly today's most overlooked aspect of securing the enterprise and should be a priority in any organization. Hackers are increasingly concentrating their efforts on Web-based applications, as insecure Web applications provide easy access to back-end corporate databases and also allow hackers to perform illegal activities using the attacked site.

Acunetix Web Vulnerability Scanner automatically checks Web applications for known Web vulnerabilities, including SQL injection, XSS (cross-site scripting), and others. Concise reports identify where Web applications need to be fixed, enabling organizations to protect themselves from impending hacker attacks.

Acunetix has a sophisticated vulnerability detection engine that comes with the pioneering AcuSensor Technology. This is a new security

technology that allows developers to identify more vulnerabilities than with a traditional Web Application Scanner, while generating fewer false positives. In addition, it indicates exactly where the vulnerability is within the code and reports debug information. It also locates CRLF injection, code execution, directory traversal, file inclusion, and authentication vulnerabilities.

Acunetix Web Vulnerability Scanner is available in three versions: A Small Business version for one nominated Web site; an Enterprise version to allow for scanning of an unlimited number of Web sites; and a Consultant version, which allows users to perform penetration tests for third parties.



We Know You're Busy

That's Why We've Developed Articles That Won't Waste Your Time

- Product Releases & Overviews
- Market & Technology News
- Advice, Strategy & Tips From Experts

It's all available
both in print
and online
at [Processor.com](http://www.processor.com)!



Processor and Processor.com are available to anyone free of charge.

Call (800) 819-9014 to subscribe to the weekly print Processor or go to www.processor.com to read articles and view thousands of products online.

Security Trends For 2009

Compliance & Budget Will Shape The Landscape Next Year

by Chris A. MacKinnon

IT’S BEEN A WHIRLWIND YEAR IN IT security—do spam, malware, regulatory compliance, and centralized monitoring and management ring a bell? And if experts are right in saying that security concerns are increasing in volume, we can also expect an interesting year for security in 2009. Here we’ll talk about some of the biggest security issues and trends that are expected to impact data centers in the coming year.

Mostly Compliance

Robert Grapes, chief technologist with Cloakware (www.cloakware.com), says he sees compliance as a primary driver for changes within the data center, especially given current economic woes. Grapes notes, “With expense control, mergers and acquisitions, and even job losses, organizations are still expected to meet their compliance goals. Maintaining business continuity and security with the same or fewer resources will be a top challenge in 2009.”

Grapes adds that granular access controls, assignment of unique IDs for administrators, immediate revocation of entitlements, on-demand access to credentials, and the elimination of unmanaged passwords are all security issues that Cloakware is currently addressing going forward for 2009.

Rafael Etges, national practice manager for governance, risk, and compliance at TELUS Security Solutions (www.telus.com), agrees that compliance will lead with impact in 2009. Etges comments, “Compliance-driven technologies are expected to be deployed in large scale for obvious reasons, the most evident being encryption in communications and data storage. PCI DSS 1.2 is becoming effective in 2009, as well as revised privacy and breach notification laws in Canada and the U.S.” Etges says changes in the regulatory landscape and risk trends will also be affected by the profound economic downturn that will “severely impact 2009 strategic plans.”

According to Etges, budgets will be revised or canceled for security investments that cannot clearly articulate an impact to the bottom line (and even for some security programs that do). The good news, he says, is that IT infrastructure is one area that should be somewhat sheltered from the economic storm, and “keeping the lights on” will demand protection—even if that means baseline security controls, monitoring, and ongoing tactical operations. “The main question in 2009,” Etges says, “will be ‘Are we secure enough?’, and finding the best spot between over-investing and under-investing while considering the risk appetite and unique culture of each organization.”

Michael Maloof, CTO at TriGeo Network Security (www.trigeo.com), has a different slant on what to expect next year. He explains, “The top issue that IT managers will deal with in 2009 is the lack of enterprise-wide visibility. They have approached security with a variety of sophisticated point solutions, but they lack the ability to see the big picture. Enterprise-wide visibility will get more complex as portions of the data center move into the cloud, where IT

managers have even less visibility into security event data.”

The Impact

Maloof says the security-based technologies, standards, and general strategies that he expects to make the biggest impact in 2009 include active response and automated remediation technologies. He says these technologies will jump to the forefront to combat zero-day threats that will grow in number, sophistication, and speed. He notes, “Forensic tools will always have a place in the IT professional’s arsenal, but the move toward expert systems driving automated actions is inevitable.”

According to Grapes, IT managers can expect a number of items that will impact security in 2009. He comments, “We are seeing a great deal of interest in the privileged account management space. The quantity of unsolicited RFPs [requests for proposals] has dramatically exceeded our expectations. We are also just beginning to see a drive towards a single authoritative source of role information within an organization. This is the role



management space.” On top of this, Grapes says he is seeing a drive toward aggregated, correlated event and compliance information. He adds, “While security suites remain the general buying trend, we do see several niche technology areas that will in time be blended into the suites.”

To prepare for these changes, Grapes says data center and IT managers should be proactively reaching out to audit teams and addressing compliance issues head-on, rather than waiting for deadlines to approach and relying on audit exceptions. He notes, “Of course, this takes planning and scheduling to ensure that other priorities are also being met. Managers should also be investing in automation wherever possible to avoid the costs of manual efforts and to be prepared

Biggest Trend To Watch For

When it comes to security, “The biggest change that IT managers need to prepare for is the increased use of SaaS (software-as-a-service) products, which provide corporations with an attractive way to reduce CAPEX and operational costs of IT management and IT security in these tough economic times,” says Dmitri Alperovitch, vice president of threat research at Secure Computing (www.securecomputing.com). “What that means for IT managers is that

more and more of their internal proprietary data and computing is now outsourced to these SaaS service providers that can provide services such as Web and mail security and Web-based HR and financial systems. CSOs and CIOs need to be aware of the security processes and technologies employed by SaaS providers to protect their company’s most confidential data from both external and internal threats.”

Key Points

- Compliance continues to be the main driver for changes in data center security.
- Data center and IT managers should be approaching audit teams and address compliance issues head-on rather than waiting for deadlines and relying on audit exceptions.
- Managers need to beat CFOs to the budget punch by revising their security plans and optimizing their budgets.

in the event of layoffs and job losses. Be concerned about insider issues, especially in times of economic turmoil. It is the layoffs and job losses that will upset even the most trusted employee and create abnormal behaviors.”

Prepare For Change

In keeping with compliance, Etges says managers need to revise their plans, optimize their budgets, and look for cost-effective alternatives before the CFO tells them to. He elaborates, “Focus on prioritization of security activities to meet business needs, consider creative solutions and compensating controls for meeting compliance, and prepare to renegotiate contracts with vendors or outsource some of your security operations.”

On the other hand, Maloof says not to put your eggs into one basket. He says IT managers should focus on security and business continuity, not exclusively on compliance. He comments, “IT managers need to perform ongoing risk management analysis to ensure that they know where an attacker can do the greatest harm or reap the largest reward. They need to implement real-time monitoring, analysis, and response technologies around high-value assets.”

But forensics is not enough, Maloof says. He says companies that thought log management was all they needed to achieve compliance are finding that their security posture has not improved, and auditors are rightfully demanding stronger security practices. He notes, “IT managers can expect security products to either add real-time analysis, correlation, and response functionality or [be] relegated to niche functions in only the very largest Fortune 500 organizations.”

Etges concludes, “Do not assume that because you are compliant, you are 100% safe; you understand your business better than your auditors. Companies will need to cut costs and sometimes face higher risks, while attackers are already very cost-effective in their methods. Educate your management about the impact of the financial pressures on the organization’s risk profile and assess if the residual risks are still acceptable to them.”

Survey Finds Growth In Unified Communications

More than 53% of U.S. enterprises are actively pursuing unified communications. That’s according to a recent study conducted by Siemens in conjunction with Market Tools. The study calculated 506 responses from U.S. businesspeople, of which half (252) were responsible for implementing communications systems, and the other half (254) were users of the enterprise communications systems, according to Siemens.

Of the 53% who say their enterprise is actively pursuing UC installations, 16% currently have UC systems installed, and 37% have plans to install UC systems during the next 24 months.



Tricia Cooper, director of strategic marketing for North America at Siemens, says unified communications systems help organizations of all sizes communicate more efficiently and effectively, which is most appealing during tough economic times. Enterprises are slashing their travel budgets, so the ability to communicate with others at remote locations is increasing in importance.

According to Cooper, unified communications can save money in many areas. In fact, 91% of end users surveyed say UC will increase productivity and improve responsiveness, and 86% believe it will speed up business processes.

“Companies are having to do more with less,” Cooper says. “They have to really be focused on productivity enhancing features.”

Disconnect Between IT & Users

The survey also shows that there is disconnect between IT staff and end users regarding the level of interest in UC. The survey found 29% of end users had “much” or “extreme” interest in UC, but only 21% of IT personnel estimated the level of interest to be that high. Cooper says she believes part of the reason for this low estimate is because IT personnel fall short of connecting projects to business priorities.

“Those that do [connect projects and business priorities] successfully and make strategic investments that help a company get through this economic downturn are those companies that will come out of it leading competitors. More than ever it’s very critical that the CIOs and CIT execs are focused and are interacting with the line of business to ensure that what their priorities are and what they are implementing supports the business objective.”

Cooper also says she predicts unified communications will become an expectation for young employees who are fresh out of college and are familiar with new media and virtual communication.

by Tessa Breneman

Storage Issues In 2009

Continued from Page 1

Research Principal Analyst Stephanie Balaouras. She notes that to improve storage, a company has to address the entire ecosystem rather than the individual components of a storage strategy.

“I think we’ll see the elimination of some point products, [which will be] replaced by applications with consolidated functionality,” she says. “Since more companies can’t tolerate any kind of data loss and maintenance windows are shrinking, there will be a shift toward functional convergence.”

For some companies, this would likely mean implementation of a data protection suite that includes some level of automation and bundles together a number of

features, such as intrusion prevention and other security controls, along with back-up capability.

Balaouras advises companies to take advantage of the advanced features, such as automated agents for making virtual full backups, synthetic backups that can reduce backup windows, and snapshot-assisted backups.

Virtualization

Now that virtualization is being employed more, it’s likely to become more key for storage, says Alan Dayley, research director of the software and services group at research firm Gartner.

“Virtualization is a key issue and could affect storage more and more,” he says. The strategy is seen as a way to increase ROI, and its benefits include offering a nondisruptive data migration path, improving utilization, and reducing the amount of equipment and systems that have to be managed.

However, there have been some concerns about virtualization and storage, including performance and scalability, but these types of issues are getting worked out quickly, particularly with so many vendors racing to provide storage prod-

Biggest Trend To Watch For: Cloud Computing

Managed data storage is already common, but the introduction of cloud computing into the market could create more interest in that particular tactic in the months ahead. There are several companies that have already come out with cloud storage options, billed on a utility computing basis, and there will likely be more in the near future as data storage needs increase and budgets remain limited.

Although cloud computing has yet to catch on for SMEs, some analysts and experts believe that as the strategy begins to make inroads into smaller data centers, storage will be a large part of the offering. A cloud service can bundle together appliances, workflow management, applications, and storage, and as payment plan structures become more attractive, more early-adopter SMEs could hop on the cloud.

ucts that depend on virtualization environments.

Refined Processes

Sometimes, better storage doesn’t have to do with the technology employed, and Dayley believes that companies will take a harder look at their processes this year to see if they’ve been handling storage as efficiently as possible.

“You can always go out and buy another storage array to throw at the problem, but that’s not going to solve an underlying process issue,” he says. “Simply dumping the data in a new place doesn’t pinpoint the reason that space keeps running out.”

Storage strategies might involve coming up with new management techniques, using more deduplication to reduce the amount of

data, increasing server provisioning, using thin provisioning, and getting a better handle on archiving tactics.

In general, look for leaner budgets to create a broader sense of utilizing what’s already in place and streamlining operations to make sure the data being stored really needs to be kept. The year ahead should be rife with innovation, driven by the demand for more storage and the need to address accessibility, security, and provisioning issues.

“When budgets get cut, the CFO doesn’t say, ‘OK, now we can produce less data as a result,’” says Sans Digital’s Chan. “Storage demand will keep growing stronger, and data center managers will have to be creative in their approaches to be able to meet the need.”

Key Points

- Budgets will be even more important this year, and companies will look for ways to extend existing storage technology.
- Virtualization could be a hotter trend as a way to decrease the amount of equipment and increase ROI.
- Look for unified storage to make a splash as data centers work toward consolidation.

Beyond Blades

Continued from Page 1

design means they aren’t typically as dense as their blade counterparts. Recently, several vendors have introduced some creative packaging to the standard 1U chassis that has leapfrogged blades as the density champion. These systems typically incorporate two daughterboard modules, each supporting two quad-core CPUs, ample RAM sockets, and four drive bays in a standard 1U chassis.

Virtualization Software Enables Fine-Grained Provisioning

Today’s servers pack so much horsepower in such a small space that a pressing problem has become how to efficiently deploy such an abundance of resources without over-provisioning or otherwise wasting capacity. Server virtualization has become the *de facto* solution for improving CPU utilization and consolidating multiple applications onto a high-density blade chassis or server cluster. While virtualization software has gotten better at allocating processor resources, Taneja Group Senior Analyst Jeff Byrne says that virtualizing memory across multiple VMs remains an unsolved challenge. Likewise, he notes that creating a cloud-like infrastructure also requires virtualizing I/O and storage.

Memory management in a virtualized environment is still relatively crude, with most hypervisors supporting only a fixed allocation of RAM to each VM. Perhaps signaling a trend in memory allocation technology, VMware touts its overcommitment or “memory ballooning” technology that allows the VMM (virtual machine manager) to allocate more memory to running VMs than actually exists on the physical server. Of course, not every VM can use its full allocation simultaneously; however, because the VMM can dynamically change memory allocation as needed, and because most applications will rarely need their full allotment, the scheme makes more efficient use of existing RAM. Byrne expects other variants and improvements in VM memory management from other vendors.

I/O virtualization is another technology key to a more efficiently provisioned, cloud-like infrastructure. The problem, according to IDC analyst John Humphreys, is that “Current server I/O architecture is extremely inflexible because device addresses are typically associated with the physical device. This significantly drives up cost and complexity in the data center, especially as the number of servers grows and as each device requires a host of LAN and SAN connections that are tied to a specific machine.”

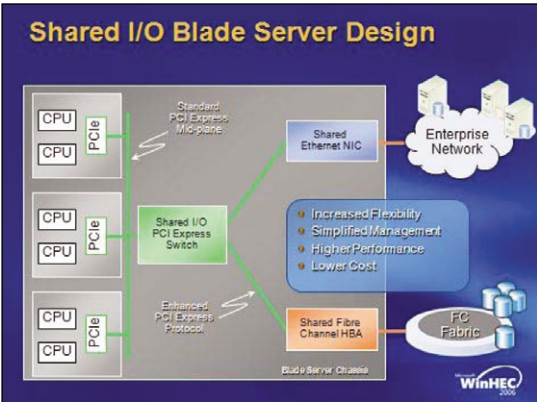
Arun Taneja, founder of the Taneja Group, points out a number of technical approaches to I/O virtualization, ranging from the creation of high-speed networking fabrics (typically using Infiniband or 10GbE) to switches using external PCI Express buses.

A counter-trend to the increasingly granular resource provisioning enabled by virtualization is so-called server aggregation. Taneja believes that the ability to gang servers together—in essence creating a large virtual machine out of many physical systems—while still a niche technology should get more important as enterprises base their infrastructure on small, standardized, dual-processor systems. Aggregation lets applications “see” multiple blades or 1U servers, say 64 processors or more, as a single machine—conceptually similar to what Intel’s Hyper-Threading does for multicore CPUs. Gartner VP and Distinguished Analyst Tom Bittman is somewhat dismissive of the need for aggregation, noting that Katana pioneered this concept several years ago and couldn’t find a market. The company subsequently abandoned the technology and rebranded itself to focus on conventional virtualization products.

The Future Of Enterprise Clouds

Building an enterprise cloud computing environment is becoming feasible thanks to

increasingly capable server hardware, shared storage networks, virtual I/O technology, more sophisticated virtualization management software, and a services-oriented application architecture. Blade servers will undoubtedly play a major role in building



This figure illustrates a typical architecture for a shared, virtualized I/O fabric for a blade server.

Source: “*Windows Server Scalability And Virtualized I/O Fabric For Blade Server*”; *Presentation to WinHEC 2006; Chris Petty, CTO, NextIO; Son VoBa, program manager, Microsoft; May 2006.*

the dense server farms required but face competition for other server packaging architectures. VMs will also need to be augmented by special-purpose I/O fabrics and SANs; all glued together via what Bittman terms a meta operating system managing a distributed fabric of virtualized resources.

Enhanced Backup Options For SMEs Yosemite Backup 8.7

No company doubts the importance of backing up data. It’s a crucial aspect of ensuring that a company’s data is kept safe. Yosemite Technologies’ Yosemite Backup application has been offering a backup solution for companies since the early 1990s.

Yosemite Backup is designed to be simple to purchase and upgrade and supports a range of platforms, including the latest Windows OSes, NetWare, and Linux. Another mainstay feature is the ability for companies to purchase a single backup server to

facilitate their backup needs instead of needing to acquire several.

The latest version of the application, Yosemite Backup 8.7, includes support for Windows Hyper-V and VMware ESX. It also supports Windows PE 2.1 for Vista and Windows Server 2008 disaster recovery.

Yosemite Backup 8.7 is designed to enable current customers to seamlessly update their environments while allowing new customers to easily add the applica-

tion. Users can implement push technology to update their Master Backup Server while automatically having updates installed on all deployed backup clients. Also included is support for SAN and shared devices, as well as Windows services, including Microsoft DFS, Active Directory Lightweight Directory Services, SharePoint 3.0 SP1, and Exchange 2007 SP1.

The Yosemite Backup software development kit version 1.0, which provides access to the API on which Yosemite Backup is based, is available on approval.

Yosemite Technologies Backup 8.7 allows companies to purchase a single backup server to facilitate all their backup needs.

- Yosemite Backup Standard Master Server with Yosemite Care for Windows, Linux, and NetWare: \$811
- Yosemite Backup Windows Unlimited with Yosemite Care: \$1,249
- Yosemite Backup Universal Unlimited for Windows, Linux, and NetWare with Yosemite Care: \$2,499

(408) 737-3311
www.yosemitetech.com



Outlook On Management

Staffing, Skills Slated To Become Paramount For Data Center Managers In 2009

by Christian Perry

IN A BITTER ECONOMY WITH NO RELIEF IN sight, survival becomes the name of the game for data centers. Management mis-steps can no longer be hidden behind flashy technologies, because their impact on the bottom line will be more evident than ever. Data center managers need to prepare themselves now to anticipate tough challenges in the coming year and perhaps even take advantage of the economic turmoil.

“The announcements of layoffs and job losses are looking to continue into 2009, with some people saying it could be 2010 before we see a recovery,” says Greg Linenger, a consultant at Corus Group (www.corusllc.com), an international provider of IT consulting and managed services. “Strong companies will use this time to cherry-pick the top candidates that have been recently let go, so once the economic turnaround happens, these companies will be ready with top talent.”

Get Staff Up-To-Speed

From an outsider’s perspective of IT, it appears that the economy is ravaging the market, as high-profile layoffs continue to dominate headlines. But a closer inspection reveals that wide-scale layoffs—and the panic that accompanies them—are not occurring. Instead, emphasis is being placed on CIOs to manage their budgets more tightly.

“What seems to be most impacted right now is discretionary [spending] for projects and the like. Keeping the lights on and assuring that the business is well-supported still is a matter of urgency—especially for organizations whose technology supports the business face to the customer. [There is] no need to give the customer an opportunity to [go to] the competition if a Web site, etc., is not available,” says Jack Probst, senior consultant for Pink Elephant (www.pinkelephant.com), a global IT management consulting and education provider.

Probst does not expect to see staff additions occurring in data centers, though he says that companies might look closer at off-shore data centers to cut costs. Linenger says that while data centers will look to outside companies and consultants for help with well-defined projects, this isn’t a new pattern, so existing employees are already learning to cope. And while those employees will likely feel the burden of layoffs and other cutbacks around them, managers must ensure that they remain on top of their games.

“Like any down market, the atmosphere will mean tough times and may add some tension to the workplace,” says John Baschab, senior vice president of management services for Technisource (www.technisource.com). “What we do, and advise our clients to do, is use this as a chance to sharpen their game and make sure that everyone is executing their jobs perfectly so that we do not let our clients down. There is little margin for error in this environment.”

If existing resources—including personnel—are operating efficiently, the coming

year should not pose major problems for managers. Evans Mullan, chief operating officer for Managed Data Holdings (www.manageddataholdings.com), explains that his company is always looking to leverage the existing headcount without adding expenses, which helps it to adjust in times of unexpected downturns. Further, he stresses the importance of keeping open communication channels so that employees are aware of events unfolding in the broader economy and in their specific industry.

Watch The Technology

Management styles and trends in IT tend to pursue technology trends, and 2009 should continue that pattern. Probst says that there is currently a strong push for IT to organize around IT services, and embedded in that concept is the impact of technologies such as virtualization and cloud computing. In turn, he says that managers will need to begin thinking of ways to find

none exists. I call this taking the friction out of the organization—eliminating wasted energy. Of course, that would also be human energy doing redundant or inefficient tasks,” Probst says.

Probst also predicts an increased focus on project management and business alignment in 2009. Both he and Mullan also foresee the green movement affecting

Key Points

- Because hiring is expected to decrease, data center managers need to extract as much value as possible from their existing employees.
- Management trends in 2009 will be closely aligned with technology trends, including virtualization, cloud computing, and the continued impact of green computing on the bottom line.

management styles, as managers continue to see the positive impact that green technology can have on operating expenses. According to Mullan, managers will need to look for opportunities where deployment of green-oriented solutions can have an immediate or midterm benefit.

So which management trends could fall by the wayside in 2009? “There was a push for a while for running IT as a business,” Probst says. “Although I think this acumen has relevancy still today, peddling this concept to the business, especially in light of the business trying to keep its head above water, doesn’t seem to be the right thing to do now.”

Predicting Pay

Although the economy could stifle new hiring, it isn’t likely to heavily impact salaries and pay rates in the IT sector. Technisource’s Baschab says that pay rates will be subject to both upward and downward trends of equal magnitude and thus will likely remain stable to slightly down. Linenger adds that an increasing number of companies are giving raises based on performance instead of across the board.

Biggest Trend To Watch For: Modified Hiring Practices

As organizations struggle with tighter budgets in 2009, experts forecast that recruiting efforts are going to focus on candidates with broad skill sets and deeper levels of experience. Evans Mullan, chief operating officer of Managed Data Holdings (www.manageddataholdings.com), says that managers will need to be particularly careful with their hiring decisions because the ability of new hires to make an impact on business will be amplified by management itself and will be expected by fellow employees.

“The biggest increases will be jobs that can help reduce a company’s IT costs. The four skill sets that will see better pay rates include virtualization skills, storage design and administration, business process, and the project management

skills to keep the initiatives on schedule,” says Corus Group consultant Greg Linenger (www.corusllc.com).

John Baschab, senior vice president of management services for Technisource (www.technisource.com), adds that demand remains high for IT professionals in business analysis, data center management/operations, infrastructure architecture, and business intelligence and especially for network/application security and compliance skills.

“We expect to see extended hiring processes as companies leverage market conditions and exercise selectivity,” Mullan says. “The right people with the right skills in the right job’ is a theme we will live by.”

The Latest Green Trend: Surfing The Web

A study by Internet security company SecTheory shows there might be ways to surf the Web in a way that conserves power and keeps with the “green” trend.

By running amperage tests on the United States’ top 100 Web sites, the study was able to determine which types of sites were the most power-hungry. The study found that sites featuring Flash animation, such as a rotating banner, were the most intensive when it came to power draw.

To conduct the tests, SecTheory recorded the amperage over time of different sites using both Internet Explorer and Mozilla Firefox. The tests were performed on a notebook that is representative of a machine managed by an average user, and no special settings were configured in the operating system or the browser to increase or decrease the power consumption of each site. The study makes special note that the most important measurement was not how much wattage each Web page pulled while loading but how much wattage was used over a period of time while the page idled.

“If you were to take this and apply it to every single computer that is turned on in the entire world, and figure out approximately how many have their browsers turned on, and how many are idling on a power-intensive Web site, you’re talking about megawatts of power,” says SecTheory CEO and Founder Robert Hansen.

Conserving Power

Such a large amount of power consumption can add up in bills within a small to medium-sized enterprise. But Hansen offers some suggestions for conserving power, not only for environmental purposes but also to save strain on a company’s wallet.

Among his suggestions is to put computers into power-save mode, which Hansen found could save up to 15 watts of power. SecTheory also suggests companies should have static Web pages, because most employees use their company’s Web site as their default home page.

“A company’s start page should be something that doesn’t have any active scripting on it—doesn’t have any Flash movies—so users end up sucking less power for the entire company,” Hansen says.

Individuals can also conserve power by closing the browser when not in use or returning to a static page so that, if left idle, won’t draw as much power. Hansen says that even minimizing a power-intensive browser window can significantly conserve power. “When we closed the browser—just minimized it—the utilization went way down, because it wasn’t having to repaint the page,” Hansen says.

by Kris Glaser



Dell To Reduce Packaging

Computer giant Dell announced a plan to reduce packaging in its desktops and laptops by as much as 20 million pounds in the next four years. With this move, which will save the company about \$8 million over four years, Dell wants to reduce its environmental impact. It's been criticized in the past for its packaging habits. Overall, Dell says it will cut packaging material for desktops and notebooks by 10%; the company also plans to use more environmentally friendly materials, such as high-density polyethylene, which is made from recycled milk jugs and laundry detergent bottles, to increase its packaging's recyclability.

Survey Shows Strong Interest In UC

A recent study by Market Tools shows that there is a high level of interest in unified communications among large enterprises. More than half of businesses surveyed are pursuing or currently offering some type of UC installation. Every group in the survey says that UC seems to potentially offer greater speed in business processes and help improve customer satisfaction. Yet only 21% of IT staffers say their end users have the desire for UC in companies where interest was high. About two-thirds of end users consider their companies' UC progress modest; the other third say the UC efforts at their company were poor. For more on this survey, see page 9.

Novell Cancels BrainShare 2009

Every year for the past two decades, Novell has held BrainShare, a training and discussion conference designed for Novell customers and partners to learn about Novell technology. In 2009, however, there will be no conference. Citing the economic pressure for companies to cut business expenses, including travel, John Dragoon, chief marketing officer for Novell, announced that the event was canceled. In a statement, Dragoon pledged that Novell will still distribute all the same information and materials, just without a conference in which to discuss it. He promised that Novell "will do this through online classes, virtual conferences, and local tours.

Delta Starts Up Wi-Fi Service

Delta Airlines announced plans to incorporate Wi-Fi into all 330 domestic aircraft next year and implemented Wi-Fi into six of its airplanes as a demonstration. The wireless access service (Aircell's Gogo) is currently available on shuttle flights throughout Washington, New York, and Boston airports. Until Dec. 31, Wi-Fi service will be available for free. After that, pricing will be \$9.95 for flights less than three hours and \$12.95 on longer flights.

Apple Sales Flat

Compared to November of last year, overall Apple sales fell flat in the United States this November, while Apple watched sales of Microsoft Windows PCs climb 7%, says research firm NPD Group, which tracks retail sales. Sales of desktops were down 20%, with Macs down 38% and Windows desktops down 15%. Apple notebook sales were more positive in November after a 22% rise in sales. Windows notebooks saw a 15% increase in sales.

Cybercrime On The Rise

Cybercriminals are taking advantage of consumer anxiety, according to McAfee's Virtual Criminology Report. Scammers are resorting to "get-rich-quick" schemes that target people searching for holiday deals online. Combating this type of cybercrime and its noticeable increase will become increasingly difficult as the government focuses on stabilizing the economy rather than tracking down Internet crime. In addition, because of a lack of ongoing training, there is a shortage of IT specialists to fight cybercrime. Russia and China are key safe havens for cybercriminals; Moldova and Brazil are quickly becoming cyber-scapegoats.

Greener & Leaner

The Top Trends For Green IT In 2009

by Sandra Kay Miller

. . .

GREEN IT: IT'S NO LONGER JUST a buzzword for getting the executive office to buy into new technologies such as virtualization or more energy-efficient equipment. Once thought of as a feel-good initiative for enterprises wanting to improve their brand image through environmental responsibility, the greening of the data center has become a mandate for organizations of all sizes due to increasing energy costs and challenging economic conditions.

Christopher Mines, Forrester senior vice president and lead green IT analyst, outlines some of the biggest trends that will be impacting not just data centers but organizations as a whole in the coming year. "It's not simply about decreasing the use of energy or reducing the environmental footprint of the data center, but throughout the entire business," says Mines.

Smart Growth

Despite a slowing economy, organizations are still moving forward with green initiatives that encompass a variety of

expenses, which supports the trend of addressing a broader issue.

People, Processes & Technology

"It is not just technology that's going to do the job. There are a lot of technologies that are important in the greening of the data center, but it's also going to take changes in processes and behavior on the part of your IT organization and throughout your entire company to really achieve the kinds of green IT goals that companies are setting," says Mines.

Consolidating data centers, implementing thin-client systems, and adding virtualization technologies are commonly found on the short list of green IT initiatives, but in the coming year, enterprises are also going to be focusing on quick wins that lend to green savings. Comprehensive recycling plans, turning off unused equipment, rearranging racks for better airflow, and even ride sharing and remote access can quickly add up.

Similarly, green IT is not just the realm of the data center staff. Mines suggests positioning IT to be the leader and enabler while engaging all employees throughout the organization. "Green IT cannot simply be a top-down mandate from management. There has to be a big bottom-up element, as well. We found successful companies

energy-efficient equipment as the main driver for organizations deploying green IT initiatives, consider the standard life cycle of data center infrastructure. Much of the new data center hardware today uses far less energy than previous versions and often includes energy-saving utilities such as those that suspend or power down idle equipment automatically. By building green criteria into the procurement system, organizations can find themselves turning green without additional effort, such as by replacing CRT monitors with LCDs when updates are necessary.

Key Points

Organizations are implementing green IT initiatives to increase energy efficiency not only in their data centers but across the board. As the demand for and price of energy increases within the data center, reducing energy use quickly translates to increased profitability.

Similarly, green IT initiatives are looking past the electronic components to the physical infrastructure and layout of the data center itself for overall energy savings.

Need For Change

Michael Mallia, CEO of AFCO Systems (631/249-9441; www.afcosystems.com), a leader in green data center management, explains that the projected energy consumption of data centers today is unsustainable and that even without green initiatives, organizations have to reduce their power and cooling consumption in order to remain profitable.

Drilling down even further into the inner workings of the data center, environmental management solutions allow organizations to map power and cooling consumption across virtual domains, hosts, and business applications. This diminishes the disconnect that exists throughout the entire organization as to the relationships among business units, IT, facilities, and the financial units. By creating a clear picture of how resources and energy are consumed, an enterprise-wide buy-in for an overall green initiative can gain better momentum.

According to Mines, "A green data center is at the heart of changing the relationship between IT and the business. Beyond the technology infrastructure and operations, IT has a role to play in helping companies address other sources of energy consumption and carbon footprint within the organization—things like buildings, employee commuting, business travel—all of these can be addressed and enabled by IT infrastructure. We think green is a real opportunity for IT organizations to step up to a more strategic relationship with the rest of the business by being a role model not only within the IT department and the data center, but also by being an enabler for other business processes to reduce their costs, become more efficient, and get greener at the same time." ■



technologies, practices, and policies. "Most of the organizations that we work with have this before-and-after picture in their minds, but they also have multiple goals," explains Mines.

Instead of rushing to replace existing data center infrastructure with the latest green technologies, organizations are first examining where they can make the most impact. In 2009, look for an overall business alignment rather than just IT and the data center heading up the green team.

An example of this is growing logical capacity without adding to the physical assets. This can be accomplished through technologies such as virtualization, but organizations can also tap into savings through the optimization of their existing infrastructures by eliminating unnecessary redundancy and increasing utilization through management software.

However, according to a Global Green IT online survey conducted by Forrester in October, the No. 1 motivator was to reduce energy-related operating expenses (67%) followed by environmental responsibility (42%). Only 34% singled out reducing IT

engage and listen to their employees [and] get ideas from the entire staff."

That being said, there are still plenty of organizations, especially larger enterprises, looking to invest in emerging green IT technologies, including thin clients, liquid cooling, power management systems, solid-state disks, and powering their data centers with renewable energy resources such as solar and wind.

All these new technologies may sound daunting at first, but with cost savings from

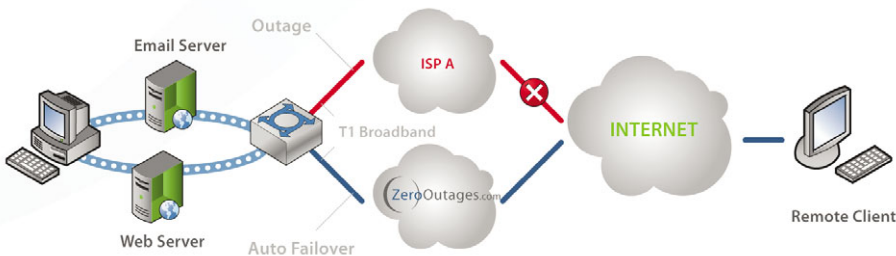
Biggest Trend To Watch For: Environmental Responsibility

Although saving energy and reducing costs top the list of why enterprises embark on green IT initiatives, the No. 2 reason (42%) listed in Forrester's Global Green survey was "Do the right thing for the environment."

This goes far beyond IT-specific green practices such as powering down unused computing equipment. From the recycling of electronics to encouraging employees to carpool or ride their bicycles to work, there are numerous nontechnical aspects of corporate green initiatives that companies can implement in addition to IT efforts.

NETWORKING & VPN

NOVEMBER 7, 2008



ZeroOutages can double the speed of your data center's Internet connectivity and guarantee 99.999% uptime.

10Mbps Web bonding for \$499/month
3Mbps wireless failover for \$149/month
(949) 477-6100
www.ZeroOutages.com/Processor

Faster Download Speeds + Peace Of Mind

XRoads Networks: ZeroOutages.com

With today's fast-paced, always-on business climate, enterprises are looking for increased bandwidth and guaranteed Internet uptime. That's why XRoads Networks, the leading broadband aggregation service provider, created ZeroOutages.

ZeroOutages delivers turnkey simplicity for enterprises looking for more bandwidth and network redundancy. The solution includes everything required for a transparent installation, including:

- A secondary broadband connection, ranging between 768Kbps and 10Mbps, which is combined with your existing primary Internet connection.
- Transparent switching technology that automatically detects any outage and reroutes traffic on the fly.
- And our dedicated network operations center, which monitors your links 24/7 and provides daily network usage and SLA reports.

All features are bundled in a single, easy-to-deploy service, which enables end users to improve their productivity and avoid unnecessary downtime.

The ZeroOutages solution is designed to provide 99.999% uptime for SAP, Oracle, CRM, and other mission-critical server applications for remote and branch offices.

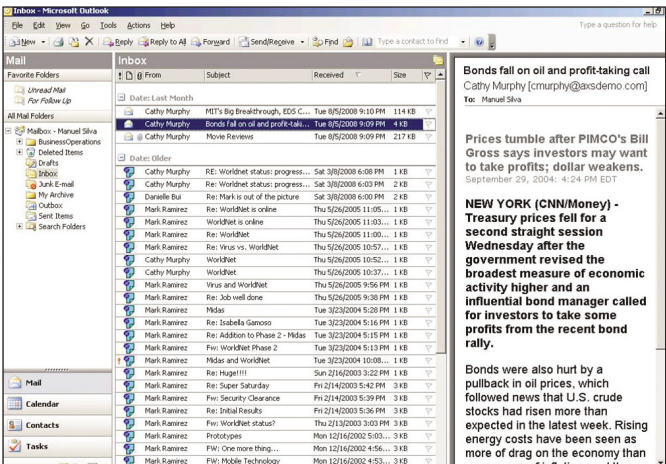
The service is perfect for both data centers and the remote and branch offices that depend on them. If your end users depend on being able to connect to your data center, you need this service.

www.ZeroOutages.com/Processor
Use this link to see a special offer.



MESSAGING & TELEPHONY

NOVEMBER 21, 2008



AXS-One Dynamic Data Migrator is designed to make email, calendar, and email contact migration more efficient.
(800) 828-7660
www.axsone.com

Email & Data Migration Get A Shot In The Arm

AXS-One Dynamic Data Migrator

Data migration from one email platform to another can be an unwieldy process, requiring a great deal of planning and preparation, not to mention an abundance of resources. For example, different platforms allow different inbox sizes, creating a potential nightmare for employees who want to retain all their old emails after conversion and migration is complete.

AXS-One's Dynamic Data Migrator application offers a policy-based method of migration designed to solve this problem. Dynamic Data Migrator lets users retain their recent emails after migration, but it also creates a way for people to retrieve older emails instantly without requiring administrators to keep them all on local servers.

the migration. Emails that are more than two years old are available to users via a Web-based portal. Overall, Dynamic Data Migrator helps users maintain access to information necessary for doing business.

AXS-One has added new features to Dynamic Data Migrator: the company partnered with CASAHL and Unify to offer a best-of-breed approach to migrating calendars, contacts, and applications in addition to email. The partnership is also designed to provide effective co-existence with Lotus environments. The new enhancements will be available in Q1 2009.

This helps relieve pressure on IT departments to create and maintain additional storage after



What are
Processor
& Processor.com
all about?

- Straightforward, easy-to-read information
- Practical advice and tips to help you do your job
- Product Showcases from new equipment manufacturers and resellers you can trust
- The best used and refurbished equipment dealers
- Being faster and simpler to use than today's most popular online search tools
- Dealers that can service or supply parts for older equipment
- In-depth information on the most products and services imaginable

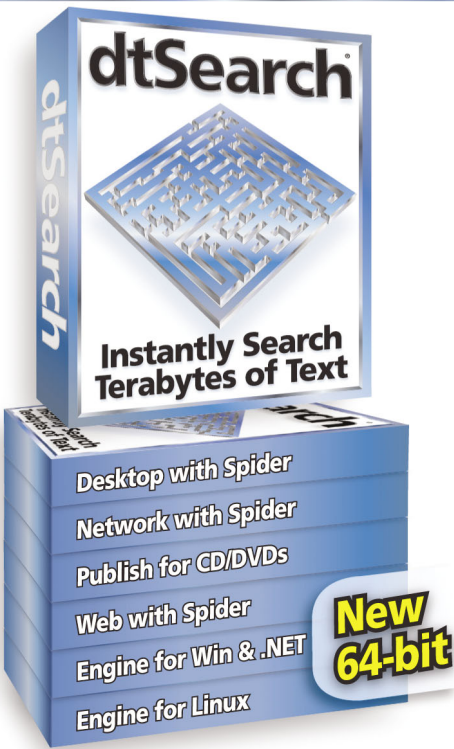
Processor.

It's all about products, news, and information data center professionals can trust.

It's all about you!

PROCESSOR \ PROCESSOR.COM

Instantly Search
Terabytes of Text



- ◆ dozens of indexed, unindexed, fielded data and full-text search options (including Unicode support for hundreds of international languages)
- ◆ file parsers / converters for **hit-highlighted** display of all popular file types
- ◆ Spider supports static and dynamic web data; **highlights hits** while displaying links, formatting and **images** intact
- ◆ API supports .NET, C++, Java, databases, etc. New .NET Spider API

The Smart Choice for
Text Retrieval® since 1991

- ◆ "Bottom line: dtSearch manages a terabyte of text in a single index and returns results in less than a second" – *InfoWorld*
- ◆ "For combing through large amounts of data," dtSearch "leads the market" – *Network Computing*
- ◆ dtSearch "covers all data sources ... powerful Web-based engines" – *eWEEK*
- ◆ dtSearch "searches at blazing speeds" – *Computer Reseller News Test Center*

See www.dtsearch.com for hundreds more reviews, and hundreds of developer case studies

Contact dtSearch for fully-functional evaluations

1-800-IT-FINDS • 301-263-0731 • www.dtsearch.com
(1-800-483-4637)

PRODUCT OF THE WEEK

The Whole Enchilada

Fairway Consulting Group Brings Total Virtualization To SMEs

by Robyn Weisman

ALTHOUGH VIRTUALIZATION OFFERS SMEs countless benefits in terms of time, space, and cost, it does tend to add complexity to network setups. “In many cases, especially in [SMEs], even seasoned IT staff likely are not expert in handling virtualization,” says Blane Warrene, director of technology solutions at CBIZ (www.cbiz.com). “Simultaneously, this same sector of companies is under intense budget stress and needs to rein in capital spending.”

At the same time, Warrene points out that many SMEs are very familiar with dedicated outsourced hosting. Therefore, Fairway Consulting Group’s Total Virtual Solution

(866/761-9990; www.fairwayconsulting.com), which offers a combination of hosted virtualization solutions from such big-name players in the space as VMware, DataCore, and PlateSpin, can provide SMEs with the path of least resistance to gaining a footing into these firms’ offerings.

“Fairway can come in and take on the role of the virtualization specialist and facilitate an initial deployment to jump-start these initiatives,” Warrene says. “The correlation between traditional outsourced dedicated hosting and the newer concept of outsourced virtual hosting is an ideal intersection through which to start these conversations with technology executives and their staff.”

A Virtualization Variety Pack

Jeffrey Slapp, president and CEO of Fairway Consulting Group, says that his firm has years of experience in testing and deploying a host of different virtual solutions. As a result, Fairway Consulting’s Total Virtual Solution offers a combination of the best solutions available, along with the services necessary to make sure they all run smoothly.

“We have always been virtual-centric and have had our hands in these areas for the last four to five years,” Slapp says. “We believe we have the industry’s best virtualization solutions for each one of the areas.” For example, Fairway Consulting uses VMware to craft the virtual computing part of its solution and employs DataCore, which “has the most flexible and most mature product out there” for virtual storage.

As the chief architect of Fairway Consulting’s Total Virtual Solutions, Slapp constructs offerings that encompass all portions of the virtualization pie. “The solutions we bring are not usually one-off solutions. You’re going to have [a] virtual storage aspect, [a] virtual compute aspect, [and a] virtual desktop, more than likely,”

says Slapp. In addition, Fairway Consulting solutions also include a disaster recovery piece, as well as application virtualization.

“[Application virtualization] crept in during the last six to eight months or so with VMware’s acquisition of Thinstall, now integrated into VMware’s product line [as VMware ThinApp],” Slapp says. “Application virtualization helps keep administra-

flavor of Citrix—on the system that is software-based [and] essentially requires a mini-computer inside. Pano Logic’s desktop device [uses an] ASIC (application-specific integrated circuit) to bridge electrical signals that come from your keyboard, monitor, and mouse and sends that over the network to your virtual environment,” says Slapp. The user sees a standard desktop as if using a PC and can access keyboards, printers, and other peripherals through standard USB hub ports within the device.

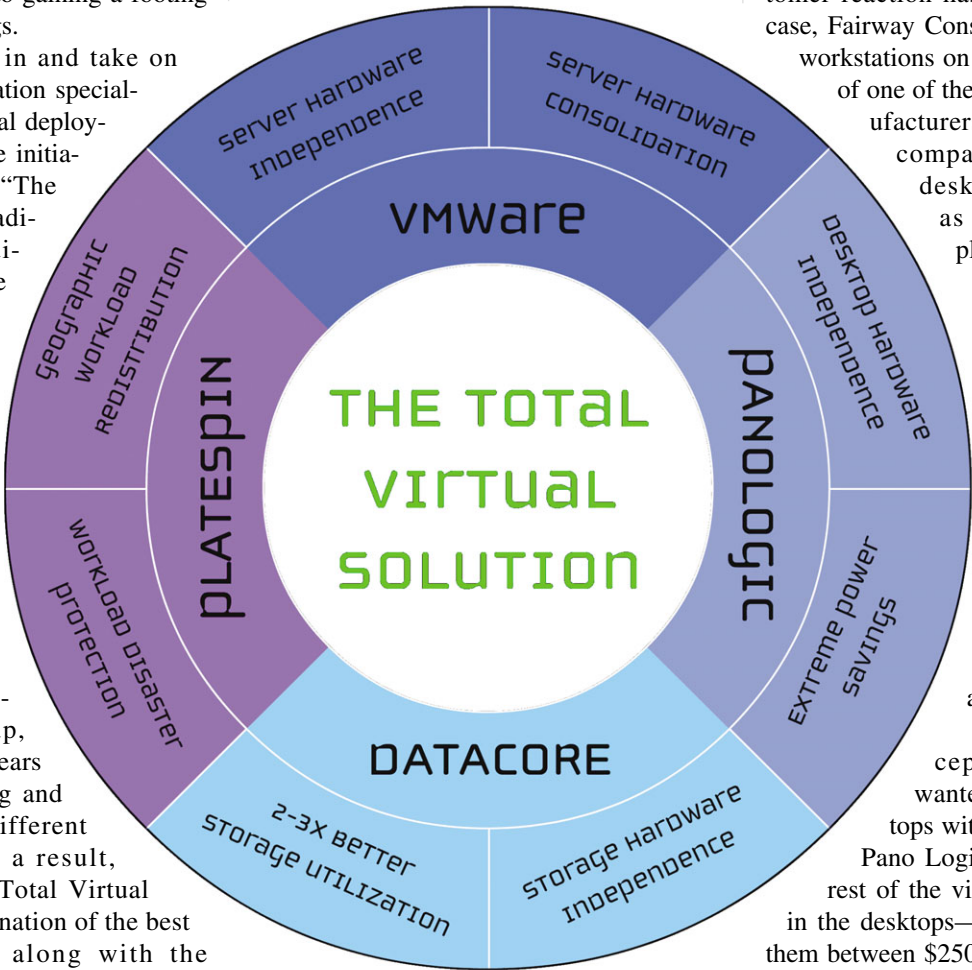
Fairway Consulting has made several hundred multiple-unit deployments of Pano Logic devices over the past year, and customer reaction has been positive. In one case, Fairway Consulting replaced 100 old workstations on the manufacturing floor of one of the top three airframe manufacturers in the world, and the company used them both as desktop replacements and as a means to track employee hours.

The degree of power savings is another reason Fairway Consulting uses Pano Logic as part of its Total Virtual Solution. Pano Logic devices consume only 5 watts of power. A typical workstation, which takes up a lot of space and has the potential for failure, uses 30 times as much wattage to work. “We did a proof of concept for a company that wanted to replace 800 desktops with 800 Panos, and just in Pano Logic replacement—not the rest of the virtualization project, just in the desktops—we were going to save them between \$250,000 to \$300,000 a year in power, and that’s a conservative estimate,” Slapp says.

Virtualization For Everyone

Not only does Fairway Consulting build Total Virtual Solutions for companies that haven’t yet built their own, the firm also supports existing virtual environments, both onsite and remotely. “We’ve been called in more times to unscrew something because someone else claimed to know what they were doing and didn’t,” says Slapp.

In addition, Fairway Consulting works with organizations of all sizes, from the five- to 10-person mom-and-pop shops to large corporations. “We don’t turn customers away based on size because the problems are ultimately the same, even if the scale is different,” Slapp says.



tion costs low while still delivering the same user experience users are accustomed to in a work environment.”

High-Tech, Low-Power Desktop Virtualization

According to Slapp, the hottest thing in virtualization right now is desktop virtualization, which enables organizations to replace massive, power-hungry workstations with a solid-state device the size of two decks of cards. Fairway Consulting has been partnering with Pano Logic (www.panologic.com) for this portion of Fairway’s Total Virtual Solution because Pano Logic is the first company to bring a zero-client device to the industry.

“Everybody else has a thin client—[it] usually has a version of Windows CE or a



Fairway Consulting Group Total Virtual Solution

Description: A complete on-demand virtualization solution that combines server, storage, and desktop virtualization, along with expertise and support for companies of all sizes that want to take advantage of virtualization but don’t have the resources or expertise to build or maintain such an infrastructure.

Interesting Fact: Jeffrey Slapp, president and CEO of Fairway Consulting Group, says that the name of his firm has caused some confusion over the years. “Do you know how many times we’ve been asked if we do consulting for golf courses?” Slapp says. “We definitely do not have anything to do with golf or any sort of golf fairway. We just like golf.”

(866) 761-9990
www.fairwayconsulting.com

Same Great Information NEW LOOK

Our new, easier-to-read home page allows you to quickly find the information you need.

PROCESSOR.com



Product  Releases

Do you have a new product that data center/IT managers would be interested in learning about?

Send your press release or related product information to press@processor.com.



CLIENTS

■ Business Objects BI OnDemand

Business Objects released the newest version of the Business Objects BI OnDemand software, which is a suite of on-demand business intelligence offerings. New features include content creation and development capabilities, which let users quickly access data from on-demand and on-premise applications. The BI OnDemand accelerator for Salesforce CRM feature lets users create a Salesforce data warehouse for reporting and analytics. BI OnDemand also lets users combine SAP and non-SAP data in a single repository. Business Objects' BI OnDemand is designed to be used with the customer's preferred software delivery method and existing business applications.

MESSAGING & TELEPHONY

■ IBM Lotus Sametime Unyte 8.2

IBM announced the latest version of its Web conferencing cloud service, Lotus Sametime Unyte 8.2. The offering lets users collaborate regardless of physical location, as though they were in the same room. Lotus Sametime Unyte 8.2 supports multiple open-document formats, includ-

ing Lotus Symphony. New features found in the latest release include network acceleration enhancements; a participant waiting room; improved alerts for meeting



organizers; support for the Firefox 3.0 Web browser; the ability to share or publish PDF, ODF, PPT, DOC, and XLS files; and support for nine languages. IBM Lotus Notes and Lotus Sametime are also fully interoperable.

■ InfoStreet Smart Email

InfoStreet has announced enhancements for the Smart Email solution for task prioritizing and development. The Asynchronous JavaScript and AJAX infrastructure supports the streamlined interface and workflow applications. Web 2.0 SaaS functionality increases communication efficiency through StreetSmart's application tools. Current customers will receive no additional charges for upgrading to the latest version of StreetSmart.

■ KACE KBOX iPhone Management Module

KACE released the KBOX iPhone Management Module, an appliance-based systems management module for Apple's iPhone. The KBOX iPhone Management Module allows enterprises to centrally deploy, manage, and track iPhones, which reduces the time and effort required to support iPhones. Additionally, the KBOX iPhone Management Module eliminates the need for manual setup and tracking of managed devices. As an integrated element of the KBOX Systems Management Appliance, the iPhone Management Module adds on to KACE's ability to manage devices from a single integrated appliance. The module includes asset discovery and reporting capabilities, which allow KBOX users to automatically track iPhones and better understand associated costs, such as carrier contract details, installed software, and reporting on asset growth.

NETWORKING & VPN

■ Fluke Networks SimpliFiber Pro Optical Power Meter and Fiber Test Kits

Fluke Networks has released the SimpliFiber Pro Optical Power Meter and Fiber Test Kits. The SimpliFiber Pro enables one technician to streamline test performance times. The FindFiber capability Remote ID plugs in to a remote patch panel port and ensures the proper location of every fiber drop on a centralized panel. With SimpliFiber Pro Optical Power Meter's Check-Active feature, technicians can quickly assess if a fiber is live, which cuts down on the time of a full power measurement. Moreover, the SimpliFiber Pro Optical

Power Meter tracks fluctuations in power with its Min/Max function. Simpli-Fiber Pro consists of the power meter, a multi-code source, singlemode source, and FindFiber.

■ ManageEngine ServiceDesk Plus 7.5

ManageEngine released ServiceDesk Plus 7.5, completely ITIL-ready help desk and asset-management software that helps manage all communications from a single point. Version 7.5 includes a number of improvements based on suggestions from the ManageEngine Roadmap Idea Box, an online community for IT administrators using ManageEngine software. With multi-site support, ServiceDesk Plus 7.5 allows multiple help desks to work as one coordinated organization, so problems are resolved with each site's business rules and service-level agreements. It also provides custom request forms to simplify the creation of forms routinely used in collecting information from end users by allowing technicians to drag and drop the required fields. Fields in the form can also be pre-populated by ServiceDesk Plus. With remote desktop sharing, technicians can log in and remotely troubleshoot problems.

■ NetScout nGenius K2 mNOC Mobility

nGenius K2 mNOC mobility, a service-management solution for delivery to Web-



based mobile devices and for extending the physical boundaries of the traditional NOC
Go to Page 16



1U Server - ASA1401i

1 CPU, Intel Quad Core Xeon 5310, 1.6GHz 8MB 1GB (2X512MB) 667MHz FBDIMM Installed, 1X 80GB SATA II 7200 RPM Installed, Max - 4TB. 1X 4 Port SATA II RAID Controller Installed. 1U rackmount Chassis, 560Watt PS. 4 Drive bay, Rails Included. Price Starting at: \$1265/-



2U Server - ASA2121i

1 CPU, Intel Quad Core Xeon 5310, 1.6GHz 8MB 1GB (2X512MB) 667MHz FBDIMM Installed, 6TB (12X 500GB) SATA II Installed, Max - 12TB. 1X 12 Port SATA II RAID Controller Installed. 2U Rackmount Chassis, 500Watt Redundant PS. 12 Drive bay, Rails Included. Price Starting at: \$4275/-



3U Server - ASA3161i

1 CPU, Intel Quad Core Xeon 5310, 1.6GHz 8MB 1GB (2X512MB) 667MHz FBDIMM Installed, 8TB (16X 500GB) SATA II Installed, Max - 16TB. 1X 16 Port SATA II RAID Controller Installed. 3U Rackmount Chassis, 800Watt Redundant PS. 16 Drive bay, Rails Included. Price Starting at: \$4995/-



5U Server - ASA5241i

1 CPU, Intel Quad Core Xeon 5310, 1.6GHz 8MB 1GB (2X512MB) 667MHz FBDIMM Installed, 12TB (24X 500GB) SATA II Installed, Max - 24TB. 1X 24 Port SATA II RAID Controller Installed. 5U Rackmount Chassis, 930Watt Redundant PS. 24 Drive bay, Rails Included. Price Starting at: \$7345/-



8U Server - ASA8421i

1 CPU, Intel Quad Core Xeon 5310, 1.6GHz 8MB 1GB (2X512MB) 667MHz FBDIMM Installed, 2X 80GB SATA II 7200 RPM OS drives Installed 20TB (40X 500GB) SATA II Installed, Max - 40TB. 2X 12 Port & 1X 16 Port RAID Controller Installed. 8U Rackmount Chassis, 1300Watt Redundant PS. 42 Drive bay, Rails Included. Price Starting at: \$12735/-



ASA7301&ASA7302-X2U-ST2 Blade Server

7U rack-optimized enclosure, holds 10 blades 3+1 redundant 4200W or 6000W or 7500W Price Starting at: \$4050/-

For more details please call



ASA COMPUTERS, INC.
2354 Calle Del Mundo,
Santa Clara, CA 95054.
www.asacomputers.com
Phone - (408)-654-2901
Fax - (408)-654-2910

Eval Servers Available on request


Since 1989, ASA has served customers like Cisco, Juniper, Caltech, Fermilab and most Universities. We provide total custom server solution with OS of your choice. Excellent pre-sales and post-sales support. Reliable hardware at most competitive prices. Please call or contact us for your next hardware purchase.

1-800-REAL-PCS



**Powerful.
Efficient.**


Intel, the Intel logo, Xeon, and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the U.S. and other countries. Price and availability subject to change without notice. Not responsible for typographical errors. All brand names and logos are trademarks of their respective companies.



Miss an issue?

Don't have a print copy handy?

Go to Processor.com and download the entire issue as a free PDF.



Product Releases

Continued from Page 15

(network operations center), is now available from NetScout. nGenius K2 mNOC mobility is designed to give IT staff the freedom to have anyplace, anytime visibility into the health of the network, applications, and service delivery environment. Features of K2 mNOC mobility include a consistent user interface with a PC-based console; a wide range of comprehensive performance intelligence; predictive early warning alerts and definitive problem identification in rich graphic detail; and access to application, network, and user information on demand.

■ Q1 Labs VFlow Collector For QRadar

Q1 Labs has launched VFlow Collector for QRadar, which is a network and application layer activity monitor. The VFlow Collector for QRadar is designed to help IT personnel manage and protect growing virtual environments. IT administrators can gain a better view into the large amount of business application activity showing up across virtual networks with the help of VFlow Collector for QRadar. Additionally, VFlow Collector for QRadar boosts the ability to identify these applications for security monitoring, application layer behavior analysis, and anomaly detection. VFlow Collector for QRadar helps operators detain application content for more intensive security and policy forensics.

■ Dickinson Calibration Service

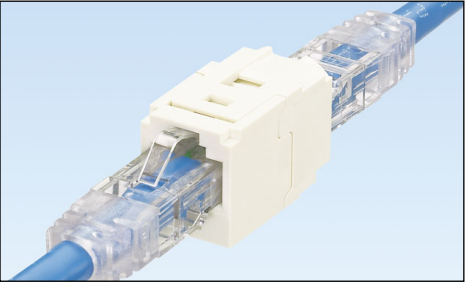
Dickson has announced that it is offering no-charge consultations on custom-point calibrations for computer room managers or other IT staff members using data loggers or chart recorders for environmental monitoring. The custom-point calibrations are specific points selected for calibration to ensure the data logger or chart recorder is operating correctly. Customers can choose between 1-point, 3-point, and custom-point calibrations.

■ Emerson Network Power Liebert CW

Emerson Network Power has announced the Liebert CW, a water-based CRAC (computer room air conditioning) system with 181kW cooling capacity. Featuring humidity control and optional variable-speed drive fans, the Liebert CW includes Liebert iCOM multiple unit communication. The energy-efficient EC plug fan controls humidity levels and maintains stable cooling. Additionally, the Liebert XD heat density cooling solution, working in tandem with the Liebert CW, removes internal heat at the source. Customers can take advantage of a remote monitoring service for Liebert CW in order to predict errors and troubleshoot problems.

■ Panduit Mini-Com Category 6 Coupler Modules & Patch Panels

When your network is undergoing maintenance or an upgrade, you may need to temporarily connect patch cables together to keep things going. New coupler modules from Panduit make this job a snap. They're rated for CAT 6 cabling with RJ-45 connectors and are designed for reliability and build quality.



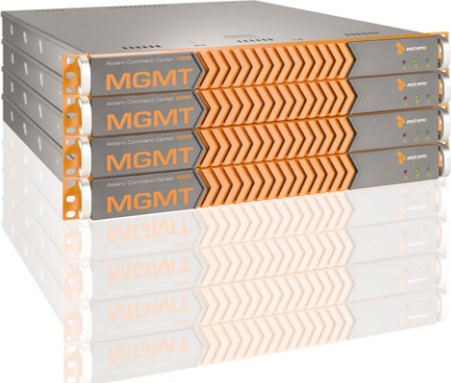
■ Raritan T1900 KVM Console

Raritan has added the T1900 KVM console to its data center management family. The T1900 includes an integrated 19-inch LCD screen (1,280 x 1,024 pixels), keyboard, and touchpad for at-the-rack access and management of servers. The T1900 supports Windows and Sun operating systems and is designed to use less energy and fit in areas short on space with its 1U console. The T1900 still manages to offer a full-sized keyboard, monitor, and mouse, however. The console ships with a combined PS/2 and USB cable and sells for \$1,895.

SECURITY

■ Astaro Command Center

New security appliances are available from Astaro. The rackmount Astaro Command Center is designed to give VARs impressive products to resell in the managed security



PHYSICAL INFRASTRUCTURE

■ Dickson Calibration Service

Dickson has announced that it is offering no-charge consultations on custom-point calibrations for computer room managers or other IT staff members using data loggers or chart recorders for environmental monitoring. The custom-point calibrations are specific points selected for calibration to ensure the data logger or chart recorder is operating correctly. Customers can choose between 1-point, 3-point, and custom-point calibrations.

■ Emerson Network Power Liebert CW

Emerson Network Power has announced the Liebert CW, a water-based CRAC (computer room air conditioning) system with 181kW cooling capacity. Featuring humidity control and optional variable-speed drive fans, the Liebert CW includes Liebert iCOM multiple unit communication. The energy-efficient EC plug fan controls humidity levels and maintains stable cooling. Additionally, the Liebert XD heat density cooling solution, working in tandem with the Liebert CW, removes internal heat at the source. Customers can take advantage of a remote monitoring service for Liebert CW in order to predict errors and troubleshoot problems.

■ Panduit Mini-Com Category 6 Coupler Modules & Patch Panels

When your network is undergoing maintenance or an upgrade, you may need to temporarily connect patch cables together to keep things going. New coupler modules from Panduit make this job a snap. They're rated for CAT 6 cabling with RJ-45 connectors and are designed for reliability and build quality.

SERVERS

■ Supermicro SuperServer 5035L-iB

SOHO environments now have a new server/storage unit option from Supermicro. Housed in a minitower case with tool-less features, the SuperServer 5035L-iB scores with energy efficiency, cost competitiveness, and quiet operation. Its foundation is Supermicro's new X7SLM-L, a 1S mother

Product  Releases

board with up to seven years’ availability and support for its chipset, the company says. 3Gbps SATA RAID, PCI, and x16/x8 PCI Express; dual 1Gbps Ethernet ports; and Intel graphics round out the vital stats.

STORAGE

■ **Addonics NAS Adapter**

Addonics has released the Addonics NAS adapter for adding USB storage devices to a LAN. Once attached to a LAN, Addonics says any network user can use USB storage devices for multiple terabytes of storage, as well as custom build their own NAS appliances with unlimited expan-



sion and RAID abilities via Addonics’ drive enclosures, port multipliers, and I/O converters. The adapter, which ships with a USB 2.0/1.1 connection and Ethernet 10/100Mbps connection, includes SMB and Samba network protocol support for compatibility with Windows, Mac OS X, and Linux platforms. Additionally, the NAS adapter offers FTP access for up to eight simultaneous users not connected over a LAN. The adapter can also be used as a print server or bit-torrent download appliance. The adapter sells for \$55.

■ **Mimosa Systems Mimosa NearPoint Retention & Classification Option**

Mimosa Systems announced the Mimosa NearPoint RCO (Retention and Classification Option), an add-in module for the Mimosa NearPoint platform that provides the ability to automatically classify and tag archived content. Mimosa RCO is designed to help organizations lower storage costs and expedite eDiscovery by enabling consistent and automated management of user-generated content based on policy. It enables IT staff to reduce storage requirements while assuring that the enterprise retains all critical information with relevant tags, so it can be easy to search and recover if needed. Mimosa RCO streamlines the archive process by automatically classifying content based on business rules, which better manages compliance and optimizes storage costs. It also can apply new policies or changes to an existing policy to historical content in place in the NearPoint archive, without rearchiving the original content.

■ **NEI SN 2500 R2 SAN Storage Subsystem**

NEI has released the SN 2500 R2 SAN Storage Subsystem. This unit is a carrier-grade, highly reliable NEBS Level 3-certified rack SAN storage subsystem created for telecom OEMs and ISVs. The SN 2500 R2 is designed with technology that can



choose among Fibre Channel, SAS, or iSCSI interfaces. It also lets users decide between AC or DC power, as well as SAS or SATA hard drives. Customizable platforms offered by the SN 2500 R2 give users the flexibility to choose the system

that best meets storage needs and customer data lifecycle requirements all in the same form factor.

■ **NetApp SANscreen 5.0**

NetApp has unveiled SANscreen 5.0, which is designed to deliver better storage management capabilities to users. SANscreen 5.0 helps users cut costs and makes data centers more efficient by proactively aligning storage resources with application requirements. SANscreen 5.0 also allows for real-time, multivendor, multiprotocol service-level oversight of the storage environment and helps users control storage as an end-to-end IT service. SANscreen 5.0 capitalizes on and broadens the features offered by the existing product suite, such as providing new capacity management features. These features include an information warehouse and an incorporated business intelligence engine, which offers global infrastructure visibility and accommodating reporting capabilities.

■ **Super Talent Technology UltraDrive LE & ME SSDs**

Super Talent Technology has released a new line of UltraDrive SSDs that the company says are twice as fast as the world’s fastest SATA hard drives while using less power and generating less heat. Super Talent is shipping the UltraDrive LE SSD line in capacities reaching up to 256GB (32, 64, and 128GB models are also available). The drives were designed specifically for enterprise server and data center use and support sequential read/write speeds of 230/170MBps. The drives are based on SLC NAND Flash memory. The Ultra-Drive ME SSD line, meanwhile, offers speeds up to 200/160MBps and is the company’s third-generation MLC NAND-based SSD. The new line will be available next month.

■ **Symantec Veritas CommandCentral 5.1**

Symantec introduced the latest version of its storage optimization suite, Veritas CommandCentral 5.1. The offering is designed to help organizations reduce their



storage expenditures and better manage existing resources. Veritas CommandCentral 5.1 now features agentless capabilities, better availability with the Storage Change Manager, and SMI-S specification compliance. Veritas CommandCentral 5.1 starts at \$20,000.

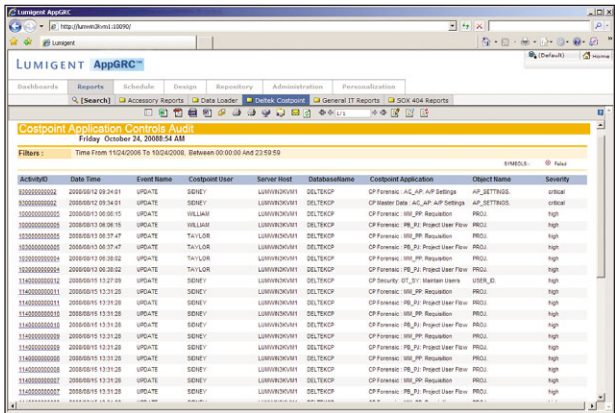
Do you have a new product that data center/IT managers would be interested in learning about



Send your press release or related product information to press@processor.com.

NETWORKING & VPN

NOVEMBER 7, 2008



The Lumigent AppGRC suite helps companies drive down compliance costs while improving governance-driven productivity and profitability.

Prices range from \$42,000 to \$360,000, depending on complexity of monitored application and size of the customer

(866) 586-4436
www.lumigent.com

Drive Down Costs, Drive Up Productivity & Profitability
Lumigent AppGRC

Meeting GRC (governance, risk, and compliance) requirements for primary business applications is important for companies. Lumigent’s AppGRC suite of applications is designed to help companies drive down compliance costs while improving governance-driven productivity and profitability.

Elements of the suite include AppGRC for Deltek Costpoint and AppGRC for PeopleSoft Financials, with more applications to follow. Using automated data baselining and continuous monitoring of data fields at the database layer and their controls, the applications are designed to strengthen the integrity of critical business operations and reporting for applications that use IBM DB2, Microsoft SQL Server, Oracle, or Sybase databases. The suite enables customers to watch data, identifying the who, what, when, and before/after values. When a change exceeds AppGRC’s set values, AppGRC issues the company an alert.

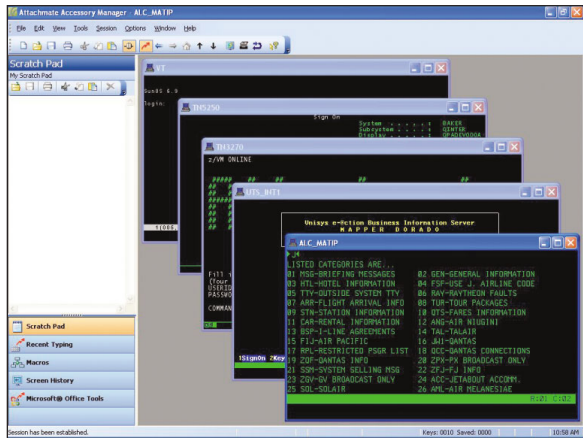
AppGRC is designed to save companies thousands of hours of controls tests by using reports and templates to help companies pass audits. The approach includes discovery, control, and application data and process visibility. AppGRC discovers where sensitive data is stored and how it correlates to processes and applications, and then assesses internal control objectives and how they’re being met.

AppGRC monitors operations to reduce the need for evaluations and collects details about data changes. If anything is outside set policies, AppGRC compiles and delivers the results to confirm or deny the effectiveness. AppGRC’s full compliance view identifies all data and its controls that have not changed over time, while identifying all data and controls that have changed, with before and after images to minimize audit preparation and simplify presentation.



NETWORKING & VPN

NOVEMBER 7, 2008



Attachmate INFOConnect Enterprise Edition 9.0 is a host access mainframe package designed to provide Unisys mainframe users with secure, streamlined multihost access; reduced costs; and enhanced productivity.

(800) 872-2829
www.attachmate.com

Extending The Value Of Mainframe Applications
Attachmate INFOConnect Enterprise Edition 9.0

To give companies a host access mainframe package for those using Unisys mainframes, Attachmate has unveiled INFOConnect Enterprise Edition 9.0. This latest version is designed to help companies extend the value of mainframe applications, boost end-user productivity, and reduce costs. It boasts the Microsoft Windows Vista certification and enhanced security features, all designed to deliver secure, productivity-focused multihost emulation.

By improving information flow, enhancing user productivity, and lowering total cost of ownership, INFOConnect is designed to streamline multihost access in a single application, increasing efficiency and providing modernization of existing mainframe applications right out of the box.

INFOConnect Enterprise Edition 9.0 includes FDCC (Federal Desktop Core

Configuration) compliance, FIPS validation, support for IPv4 and IPv6, and DoD PKI standards support.

Vista certification lets IT managers support desktop technology changes while leveraging their preferred platforms. The FIPS validation includes Reflection Secure FTP Client and SSL support to give companies an encrypted, secure FTP solution. IPv6 and IPv4 support enables INFOConnect Enterprise Edition 9.0 to connect to the mainframe on the network even as Internet standards continue to morph. DoD PKI is the highest level of government security, ensuring that companies using INFOConnect Enterprise Edition 9.0 will be safe and secure.



PHYSICAL INFRASTRUCTURE

CS-27V Sentry Smart CDU



Provides reliable power distribution. Use one IP address across different power circuits.

- High Density
- Multiple Voltage Outputs
- Input Current Monitoring
- IP Access & Security
- Alerts for Power & Environmental Conditions
- **NEW!** Fuse Retractors for Branch Circuit Protection
- Environmental (Temperature & Humidity) Monitoring
- **NEW!** Linking for Smart CDU (Expansion Modules)



Server Technology, Inc.
(800) 835-1515
www.servertech.com

PHYSICAL INFRASTRUCTURE

4-Post Server Rack



19" or 23" EIA Rack Rails

- Expandable Depth From 26"D to 42"D
- 10/32 Tapped or Square Hole Rack Rails
- 40U, 44U, 48U Sizes
- Black Powder Coat Finish


To Learn More, Visit:
www.iscdfw.com




Information Support Concepts, Inc.
(800) 458-6255
www.iscdfw.com

PHYSICAL INFRASTRUCTURE

Sentry 30-A Fail-Safe Transfer Switch




- Provides fail-safe redundant power to single-power corded equipment
- Fast Transfer Rate—Power interruption will not affect equipment uptime or performance
- Patented arc-suppression and power in-feed sharing technology extend product life and performance
- High Density—100 to 240V and 16/32A



Server Technology, Inc.
(800) 835-1515
www.servertech.com


PHYSICAL INFRASTRUCTURE

RPC 14



8 Receptacle Power Control and Monitoring

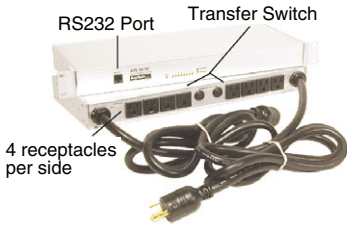
- Current, Voltage, Power, and Temp Monitoring
- LCD Screen displays power monitoring information
- RS232 interface, 120/208VAC 10,20,30A Models
- Turn On, Off, or Reboot any or All Receptacles



BayTech
(800) 523-2702
www.baytech.net


PHYSICAL INFRASTRUCTURE

RPC 18



8 Receptacle Power Control / Monitoring w/Trans Switch

- Current, Voltage, Power, and Temp Monitoring
- Automatic Transfer Switch
- RS232 or Network Interface 120/208VAC 10, 20, 30A Models
- Turn On, Off, or Reboot any or All Receptacles



BayTech
(800) 523-2702
www.baytech.net

PHYSICAL INFRASTRUCTURE

Air Conditioned Server Cabinet

Prices starting at
\$3,420




- From 1,800 to 20,000 BTU
- Rackmount and Sidemount
- Three sets of L-shaped universal vertical rails
- Base, casters, and leveling feet standard
- Removable side panels
- Lexan front door (or solid steel) w/ lockable handle
- Steel rear door with lockable swing door handle
- Avail. in heights of 24u, 30u, 35u, 40u, 42u, 44u, 48u; depths of 24", 30", 36" and 42"; widths of 19", 23" & 24"



Rackmount Solutions Ltd.
(866) 207-6631
www.rackmountsolutions.net


PHYSICAL INFRASTRUCTURE

RPC 22



24 Receptacle Remote Power Monitoring & Distribution

- Current, Voltage, Power, and Temp Monitoring
- LCD Screen Display
- RS232 Interface 120/208VAC 10,20,30A Models
- Power Distribution and Monitoring In One Unit



BayTech
(800) 523-2702
www.baytech.net

PHYSICAL INFRASTRUCTURE

Cat5E And Cat 6 Cables



We're more than a Rackmount Company! A complete line of Cat5E, Cat 6 cables, including excellent bulk pricing.


- Cat5E patch and Cat 6 patch panels; Fiber Optic Cable
- Molded, snagless, strain-relief bootied patch cables
- Custom cable assemblies
- Cat5E and Cat 6 bulk UTP network cables
- SVGA super monitor cables and VGA extenders



Rackmount Solutions Ltd.
(866) 207-6631
www.rackmountsolutions.net

PHYSICAL INFRASTRUCTURE

CoolCube 10




\$2797
Meets any price!

RACK IT - STACK IT - MOUNT IT - HANG IT

Tired of Overheated Server Rooms? The CoolCube 10 Offers an Exceptional Cooling Solution for Electronics


- 50% smaller than competitors, provides 10,000 btu/hr
- Installs into any 2- or 4-post 19" rack or is portable in room
- Automatic restart function for power outages
- Cost-effective for after-hours and weekend cooling
- Uses standard 115 VAC power source



Rackmount Solutions Ltd.
(866) 207-6631
www.rackmountsolutions.net


PHYSICAL INFRASTRUCTURE

Switched CDU CW-24V2



Power cycle individual or groups of outlets to remotely reboot network devices.

- 208V to 240V Single or 3-Phase power at 20 or 30A
- Access and Security: Web interface, SSL, SSH, Telnet, SNMP, LDAP, TACACS+, and RS-232 access
- Environmental Monitoring
- Fuse Retractor
- High-Density 24 IEC C13



Server Technology, Inc.
(800) 835-1515
www.servertech.com


PHYSICAL INFRASTRUCTURE

CS-3AVY Sentry Smart CDU



Provides reliable 3-Phase power distribution. Multiple outlet types distribute multiple voltages via 3-Phase 208V Wye power in-feed.

- High Density
- Multiple Voltage Outputs
- Input Current Monitor
- IP Access & Security
- SNMP Traps
- Environmental (Temperature & Humidity) Monitoring
- Branch Circuit Protection
- **NEW!** Linking for Smart CDU (Expansion Modules)



Server Technology, Inc.
(800) 835-1515
www.servertech.com

PHYSICAL INFRASTRUCTURE

NX119-CIP32e




Sale Price \$2,273.00

- High-density Cat 5 KVM with either 16 or 32 ports in 1U
- Single (One-Man) installation slide for easy, quick installation
- 104-key notepad keyboard with full numerical pad
- Mix PS/2, USB, and Sun multiplatform switch capability
- Secure remote user access across the World Wide Web



i-Tech Company
(888) 483-2418
www.i-techcompany.com

PHYSICAL INFRASTRUCTURE




Maintain

Your peace of mind, your sanity,
and keep your cool.

K3 Resource Manager


AFCO Systems helps you maintain an existing datacenter. Do you have a row or area of high-density enclosures that are overheating? Don't band-aid the problem by throwing expensive added in-row cooling at it. Change your thinking, put away the fire extinguisher, and talk to AFCO about how their active enclosures can solve your problem. Talk to AFCO and enable your ability to measure, manage, monitor, and maintain your critical datacenter facilities.



AFCO Systems
Datacenter Resource Solutions

AFCO Systems
(613) 249-9441
www.afcosystems.com

PHYSICAL INFRASTRUCTURE




Dualcom S

- Cyber Breaker® the Virtual Circuit Breaker™
- Monitor and manage current consumption at EACH outlet
- TCP/IP or RS-232
- SNMP management
- Available with Enterprise Management Console™ (EMC) with Virtual PDU™


CYBER SWITCHING®
Cyber Switching Inc.
(888) 311-6277
www.cyberswitching.com

SERVERS



NEC SigmaBlade Servers

- **SigmaBlade 120Bb-6** features a standard chipset, two SAS 2.5 inch internal hard disk drives, and 32GB memory.
- **SigmaBlade120Bb-d6 SAN** features 96GB memory. It has no internal hard disk drives and requires connection to a SAN storage for its hard disk needs. Great for virtualization.
- **SigmaBlade 120Bb-m6** is a dual-slot, high-capacity blade with 96GB memory and six SAS 2.5-inch hard disk drives.



CONDRE STORAGE

Condre Storage
(952) 294-4900
www.condrestorage.com

CATEGORY



Your Picture Here

Your Heading Here

Text promoting your company, product, or service here. Text promoting your company, product, or service here. Text promoting your company, product, or service here. Text promoting your company, product, or service here. Text promoting your company, product, or service here. Text promoting your company, product, or service here. Text promoting your company, product, or service here.



Your Logo

Company Name
(000) 000-0000
www.CompanyWebSite.com

Build Your Brand Awareness!

PROCESSOR SHOWCASE

- Color picture
- Web exposure
- Proven publication
- Detailed product description
- Only \$176 an issue (12-issue minimum)

Your Internet exposure is at no added cost!

To place your color photograph in the next issue of *Processor*, mail this completed form and your photo (35mm print, 3 x 5 inches, 3½ x 5½ inches, or 4 x 6 inches in size) to: *Processor*, P.O. Box 85510, Lincoln, NE 68501



Your Internet ad begins immediately, and your *Processor* ad starts with the very next issue.

Call Today: (800) 247-4880

Name: _____

Street Address: _____

City, State, ZIP Code: _____

Phone: () _____

Email: _____

Method Of Payment:
☐ Check ☐ Money Order ☐ Mastercard
☐ Visa ☐ Discover ☐ American Express

Credit Card # _____ Exp. /

Signature: _____

Part #: _____ Manufacturer: _____

Model/Description: _____

Price: _____

Contact: _____

Phone: () _____

Fax: () _____

State/Country: _____



Short on time?

***Processor's* print issue and Web site offer an unbeatable combination!**

When you're looking for product or buying information, turn to the print issue for a wide variety of current products from our list of hand-selected manufacturers and resellers, along with articles and information to help you stay on top of the industry.

Ready to buy? Turn to our Web site to find companies offering the products and services you need.

PROCESSOR.

Put the power of *Processor* to work for you!

OPINIONS

INFO-TECH • INSIGHT

Don't Fall Asleep At The Wheel: Be Prepared For Challenging Times

Despite many danger signals, the current worldwide economic crisis seems to have taken everyone by surprise. Governments and businesses continued to be optimistic through most of 2008 and made few plans for bad times. But the warning bells are very loud now. IT managers who fail to develop contingency plans for budget reductions in advance will make some really fast (and likely damaging) decisions on where to cut costs. Smart IT managers who plan for budget adjustments in advance will be able to make intelligent choices when the need arises.

Denial Is A Poor Strategy

IT managers have typically used a number of arguments to avoid planning for the bad times or to avoid carrying their fair share of organizational cost trimming. Predicting which industries are vulnerable makes for interesting news articles, but it's a big gamble to assume that your organization is safe. In bad times, organizations usually take preventive financial measures before danger strikes. IT is often seen as a cost center and is a target for expense reduction, especially in bad times. In a minority of cases, IT is seen as a key enabler of strategic change. In those organizations, IT and business management may accelerate certain IT projects to achieve

competitive advantage. But, even where IT is a strategic weapon, management will want to reduce some IT expenses to free up resources for core business activities. **Is IT Safe From The Storm?** IT has implemented a number of expense management measures since the turn of the century. However, this is not enough. Historically, IT has made further cost reductions when sales drop, price competition increases, and government tax revenues shrink. This cycle won't be any different. Arguing that IT has been a good financial steward

Resistance Is Futile

When the corporate expense ax falls, the natural reaction of most managers is that their areas are sacred. The importance of their areas, in their minds, overshadows the importance of some other areas in the organization. Their own budgets should be spared truncation. Let others carry the burden. Any attempt to deflect cost reduction onto others generally fails and can be dangerous to the IT manager. First, you will be seen as not helping to address the organization's critical challenge. And second, you will antagonize your fellow managers, who will reciprocate by challenging the IT budget.

Armageddon Or The 5% Solution?

There are two schools of thought on financial contingency planning: plan for fine-tuning or plan for disaster. The first approach is simpler: IT identifies what expenses must be eliminated or reduced to achieve a specific cost reduction target, say 5% or 10%. The value of this approach is that it requires the least effort. When cost reduction targets are small, IT management will typically look for cuts only in items that they consider discretionary, whereas there are many opportunities to reduce these costs, too. For example,

the help desk is generally considered nondiscretionary. But on deeper analysis, there might be an opportunity to reduce costs by limiting telephone support to normal working hours. When the target for cost reduction is small, some expense reduction opportunities will remain hidden from consideration. The more effective approach considers a dramatic cost reduction exercise. While it may seem paranoid, it can be very useful. Assume that an 80% cost reduction is required if the organization is in dire straits. To reach this target, management has to challenge every preconception it has of what is essential and what is discretionary. Every line item must be scrutinized and missing cost information collected. The result is a truly in-depth review of all expenses. It identifies all opportunities for cost reduction. With this full set of options, IT management can identify which reductions have the least immediate business impact. They can intelligently select from a set of preanalyzed options to meet a specific actual cost reduction target, which hopefully will be less than 80%. Carry out the 5% solution to be ready quickly, but complete the disaster scenario to be really ready for whatever comes. **Be Smart; Plan Ahead** When budgets require reduction, timeframes for decision-making can be very limited. If the IT manager has anticipated this situation in advance, decisions will still be painful, but they will be a good choice from a set of painful alternatives and will enhance the credibility of IT leadership. [1](#)

Send your comments to infotech@processor.com

ANDY WOYZBUN

Andy Woyzbun has more than 35 years of experience in extending and supporting IT in government, consulting, computer services, financial services, and telecommunications. Before joining Info-Tech as lead analyst, Woyzbun spent more than 10 years as CIO with several organizations. Andy has an engineering degree and masters degrees in computer science and in business administration.



won't stop the demand for cuts. Neither will arguments that cuts to the IT budget will be painful to the organization. Cuts hurt. Smart organizations will have figured out where cuts will do the least damage. But this requires advance planning when time is available for thoughtful consideration.

Computer Management (Local)				
Storage				
DataCore SANmelody				
Volume Name	Logical Size	Disk #	VolumeID	Status
\\FS01_01_01	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_02	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_03	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_04	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_05	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_06	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_07	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_08	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_09	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_10	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_11	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_12	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_13	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_14	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_15	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_16	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_17	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_18	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_19	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_20	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_21	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_22	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_23	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_24	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_25	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_26	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_27	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_28	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_29	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_30	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_31	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_32	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_33	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_34	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_35	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_36	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_37	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_38	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_39	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_40	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_41	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_42	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_43	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_44	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_45	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_46	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_47	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_48	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_49	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_50	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_51	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_52	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_53	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_54	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_55	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_56	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_57	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_58	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_59	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_60	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_61	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_62	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_63	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_64	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_65	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_66	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_67	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_68	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_69	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_70	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_71	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_72	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_73	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_74	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_75	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_76	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_77	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_78	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_79	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_80	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_81	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_82	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_83	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_84	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_85	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_86	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_87	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_88	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_89	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_90	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_91	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_92	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_93	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_94	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_95	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_96	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_97	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_98	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_99	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up
\\FS01_01_100	2007151 MB	FC-Processor-Shelf-0-Tier-1	V.(F300A45-8740-116-0227-00108044401)-0...	new Primary Up

DataCore SANmelody provides best-of-breed storage virtualization (866) 516-5491 www.fairwayconsulting.com

DataCore Does For Storage What VMware Does For Servers

DataCore SANmelody

Fairway Consulting Group offers services based on best-of-breed virtualization technologies, including storage, server, desktop, application, and disaster recovery. As a channel partner with several virtualization manufacturers, FCG helps companies focus on sustainability, data growth, performance demands, end-of-life hardware, and disaster recovery. FCG is a Premier Channel Partner with DataCore Software, with products focusing on storage virtualization, management, and monitoring. DataCore SANmelody, SANsymphony, SANmaestro, and Traveller CPR offer a combination of features and functionality to meet the needs of any enterprise. DataCore SANmelody overcomes the high cost barrier and complexity of traditional SANs by converting x86-based servers (physical or virtual) into fully capable SAN controllers that can

virtualize any raw disk and serve them to application servers over iSCSI or Fiber channel. DataCore is intelligence only, delivering the flexibility that conventional hardware virtualization cannot provide. And with DataCore, you can leverage your existing hardware and add new hardware later on-the-fly, with no interruptions. DataCore's SAN solution features include: • Hardware independence • 65% increased storage utilization on average • True active/active high availability • Asynchronous IP Mirroring • Snapshot (COW or complete image) • iSCSI and Fiber Channel-ready • 100% investment protection on upgrades



Selecting Enclosure Power Distribution Units has never been so easy!

Easy as 1, 2, 3...



Eaton's newly expanded portfolio of power distribution units, offers the broadest range of ePDUs on the market. Making the right decisions from the start, can make a difference in the dependability and efficiency of your infrastructure. Eaton is helping you make the selection of enclosure power distribution units (ePDUs), as easy as 1, 2, 3. Ask yourself these three simple questions:

Improving Your Job's Worth To The Enterprise

Small Changes Make A Big Difference In A Down Economy

by Carmi Levy

AS EACH NEW DAY brings fresh layoff announcements across all industries, IT employees can be forgiven for wondering about their own job prospects. Although there are no guarantees in today's tenuous economy, IT and data center staff don't have to sit idly by waiting for the ax to fall. They have ample opportunity to tune their career management strategies to maximize their value to the organization and minimize their vulnerability to layoffs and downsizings.

"Part of professional awareness and self-sufficiency is being able to understand where opportunities are opening and where they are closing," says Diane Morello, vice president and Gartner fellow. "You want to stay awake. We see a lot of people sleepwalking through their careers, and this is not the time to be sleepwalking."

Open Your Eyes

By raising their awareness, employees maximize their resilience regardless of what changes the company has planned. Morello says most organizations are currently focused on maximizing organizational performance over the next six to 12 months. When they assess employee performance, they look for people who most effectively drive that realignment.

"IT professionals should be focusing on the most high-profile activities that the business is currently investing in," says Morello. "They could be cost optimization initiatives, business application implementations, or related projects designed to strengthen the organization. Whatever they are, employees need to focus in on the projects and programs that are the highest profile, the biggest impact, and the biggest risk."

If you can't move yourself into one of these projects, Morello says simply doing your job won't cut it. She advises employees at all levels to keep their eyes and ears open as their respective work environments continue to evolve.

"Make sure you're performing at top notch and developing and demonstrating excellence at every stage," says Morello. "You're in the danger zone if there's something

emerging and you're one of the last people who knows about it."

Tools Matter More Than Ever Before

John Burke, principal research analyst with Nemertes Research, says tools can play an important role as employees accelerate their career management efforts.

"IT professionals should learn to use more tools, learn to use them better, and learn other people's tools and universes of func-

tion," says Burke. "You don't have to necessarily get anybody's permission to do these things. You can undertake them on your own initiative and demonstrate value without requiring additional budget authorization."

"It's a pervasive fact of life for IT workers that they have a limited ability to change the context in which they work."

-Nemertes Research's John Burke

tion," says Burke. "You don't have to necessarily get anybody's permission to do these things. You can undertake them on your own initiative and demonstrate value without requiring additional budget authorization."

Burke says this is an important distinction for IT staff who are likely already overallocated, and have neither the time nor the organizational support to stray too far beyond their defined roles.

"It's a pervasive fact of life for IT workers that they have a limited ability to change the context in which they work," says Burke. "So they have to work within the context that they have."

Look Ahead

Keeping an eye outside and on the future is key to surviving the current economy.

"You need to see what's coming. I would be looking at everything associated with quarterly statements, annual reports, and press releases," says Morello. "I'd be mining these external resources to get a better sense of what the company's plans are. Publicly traded companies often have chat boards where you can see what people are talking about. Press, shareholder, and investor Web sites often contain terrific amounts of information about what's going on in the company that seldom actually

constitute the conversations that you'd have in a day-to-day work environment."

Part of being proactive involves understanding your organization's macro environment. Morello says other companies in your sector can provide guidance.

"Look for analogous situations," she advises. "For example, if your company is in retail or financial services, watch for articles or case studies about what other companies have done to meet certain challenges. When you become an interpreter of things coming in from the outside, you're better able to apply these situations to a given problem, challenge, or opportunity."

open about the things they'll be focusing on."

When things get tough, Morello says companies often lean toward offshore outsourcing as a means of delivering similar levels of service at less cost. If you're working in an area vulnerable to outsourcing, watch out. Although approaching your manager for an honest discussion is a good place to start, Morello says this may not always give employees the confidence boost they're looking for.

"I suspect in many IT organizations, the managers themselves may find the lower they are in the management ranks, the more likely their own work is being affected by this," she says. "So anybody having this kind of conversation needs to be sensitive to the level of management and the risk that the person they're talking to is facing."

Training Isn't Always The Answer

While IT has always valued increased skills to drive career advancement, Burke says employees must be realistic. "If you're starting from scratch, a year is too long to wait to get value from some training initiative," he says. "If it's a backstop to an existing set of skills, then it's certainly worth pursuing. But if it's an area where you have no pre-existing skill or experience, it won't make much of a difference." ■

Maximizing Job Security

John Burke, principal research analyst with Nemertes Research, says the following steps can give employees the career management edge:

- Cross-train.** Downsizing organizations still need to get the same work done, only with fewer people. Employees who possess multiple skill sets may be less vulnerable to layoffs in certain cases.
- Improve your efficiency.** Use automation tools such as workflow applications and scripting to accelerate repetitive tasks and allow greater focus on value-added contributions.
- Increase your effectiveness.** Learn more about the technology and the context within which it is used. Use ticketing software to track answers and reduce future repetition of effort.
- Change your attitude.** Don't lock yourself into rigid job descriptions. Be flexible about what you need to do to help the organization.



Thanks to DMD, we don't have to sit on our old computer equipment anymore.

When it comes to IT equipment liquidation or disposal, we are serious. Let us worry about data security and destruction, EPA regulations, transportation, down time and insurance. Don't tie up your resources or take chances with your data or environmental issues.

Call DMD today!
(877) 777-0651

We Purchase:

- Computers/Laptops
- Networking Equipment
- Power/Environmental
- Telecom/Network
- Complete Data Centers
- Printers

We Offer:

- Asset Tracking/Reporting
- Deinstallation/Packing/Transport
- DOD Level Data/Mechanical Destruction
- EPA Recycling/Reuse
- Ongoing Support Plans
- Technology Refresh/Install Programs

Find out why some of the top U.S. companies and Government Agencies call DMD Systems Recovery.



DMD SYSTEMS RECOVERY, INC.
A Slightly Different Company™
Toll Free: (877) 777-0651 Phone: (602) 307-0180 Fax: (602) 307-0181
Internet: www.dmdsystems.com
Providing QUALITY GOODS and SERVICES for Industry.
Member of AFCEM, Better Business Bureau, Chamber of Commerce, HP Authorized, Member of NAID (National Association for Information Destruction, Inc.)



Get the IT industry's best resource:
the Black Box® Big Book
FREE

- » 118,000+ products
- » Award-winning catalog
- » Black Box Explains
- » Extensive diagrams
- » Buyer's guides



Cables | KVM | Cabinets & Racks | Converters | Switches |
Multimedia | Wireless | Networking | Servers & Storage | Security

BLACK BOX NETWORK SERVICES
blackbox.com/go/pro | 888-225-6921

The Instant ACCESS You Need.

See all that's available today at
www.Processor.com



IT Manufacturers Investing Overseas

Long-Term Effects To The Industry Remain Murky

by Bruce Gain

MANY OF THE UNITED STATES’ largest technology firms have recently invested considerable sums overseas to take advantage of a cheaper manufacturing base and a growing technically skilled workforce, especially in countries such as China and India.

Among the more recent large-scale investments, Intel announced in October that it was spending \$170 million on various projects in China. Intel’s investment includes \$150 million in more than 50 different research centers and enterprises, including Lenovo, Neusoft, and Tsinghua University, and \$20 million in Trony Solar Holdings, a leading Chinese thin-film solar energy development firm. Intel also said it was on track to complete construction of its previously announced \$2.5 billion 300mm wafer fab in Dalian, China, by 2010.

In December, Cisco announced the one-year anniversary of its Globalization Center East in India, which the firm described as a

United States-centric due to the investments overseas? The short answer is that the extent to which the investments might one day affect the IT world in the United States is difficult to forecast at this point in time.

“The investments in places like China, India, and elsewhere [overseas] are still relatively new,” says Rob Enderle, president of the Enderle Group. “It will be a few years before we see any real major developments out of those places, and it is difficult to predict what they might be.”

The Rise Of India & China?

Investments by United States-based technology firms overseas have largely been concentrated in China and India. Technology companies have increasingly turned to China for production, where significantly less capital is required for manufacturing. India, on the other hand, offers an increasingly educated workforce for a wide range of services at cheap labor costs. Both countries have a high volume of workers with advanced technical

Investments by United States-based technology firms overseas have largely been concentrated in China and India.

degrees, whose pay scale is generally far below that of their U.S. counterparts.

“Most of the resources are going into China and India because of the labor and high levels of education, where these countries are in a race to see who can turn out the most degreed experts,” Enderle says.

But regardless of the relative abundance of high-tech workers who work for relatively low salaries, there are still no clear signs that China or India will soon rise to take the technology lead from the United States, now or in the long term, Enderle says.

“China is still a country of mimic [products], and not a lot of original thought is coming out of either China or India yet,” Enderle says.

Indeed, while China and India may collectively account for a large concentration of science and engineering degree holders, the countries have, so far, lacked in the kind of creative thinking that leads to the creation of technology powerhouses like Microsoft and

Apple, for example, says Robert Graham, CEO of Errata Security (www.erratasec.com).

“From an innovation point of view, a few college dropouts, like Bill Gates or Steve Jobs, are worth a lot more than a million tech degree holders,” Graham says.

The Downturn’s Drag On Spending

The fact that the U.S. IT industry has entered a downturn means that there’s less money to invest in new ventures. As a result, overseas investments will likely take a hit in the near term.

“The economic collapse has put a monkey wrench in spending in general, whether it is in the United Sates [or overseas],” Enderle says.

The crisis is far from over, so its long-term effects on spending abroad remain to be seen.

“We are just a few months into it,” Enderle says. “It is going to be hard to tell what the trend will be coming out of the crisis, since we haven’t been into it long enough. But clearly, the crisis has had an impact on spending until folks work out what kind of money they have left.”

The Outsourcing Shift

A common concern among IT staffers is that one day their job will be done by someone at a data center overseas. Although thousands of tech support jobs have gone overseas during the past few years, analysts say the incidence of IT departments using services outside of the United States remains low.

“Our research indicates that the percentage of work being offshored by IT organizations remains relatively small, and that has not changed significantly over the past year,” says John Longwell, research director for Computer Economics (www.computer-economics.com). “While service providers and IT manufacturers may be increasing their use of resources in China or elsewhere, we don’t yet see IT organizations, to any large degree, engaging in direct offshoring.”

IT jobs that could wind up overseas in the future will likely involve services that U.S.-based, third-party consulting firms already offer. But instead of a U.S.-based consultant performing the services, the work will be carried out abroad. “Many IT services need to be done onsite, but certain projects can be outsourced to the likes of large consulting groups that then outsource services like programming jobs, custom projects, or custom applications, which can be done offsite,” Enderle says. “Anytime it doesn’t have to be done onsite, it can be done in India or elsewhere.”

Most Malware Comes From Downloaded Files, Survey Shows

Files downloaded from the Internet are the most likely method of malware infection, according to a malware arrival report from security expert Trend Micro (www.trendmicro.com).

The report, which covered the top 100 malware infection sources from January to November of this year, found that surfing unknown or malicious Web sites and accepting links provided in unsolicited email were the greatest sources of infection.

Paul Ferguson, who works in Trend Micro’s advanced threats research area, says that “a very low percentage—although still quite a large number by volume—of infections were due to software vulnerabilities.” Ferguson says, “This suggests that users played a key role in their own infections, such as clicking on a malicious link or being duped into opening a malicious email attachment or installing malicious software.”

The second-greatest threat of infection came from malware that already existed on an infected PC. Trend Micro indicates the current variety of multiple component malware, many of which are designed to retrieve files from remote locations and secretly download files onto PCs, account for the high infection rate. At a distant third and fourth, Trend Micro listed the opening of email attachments from unknown malicious sources and infection by removable devices, such as external hard drives, thumb drives, flash disks, and memory cards. In Asia and Australia, malware piggybacking on removable drives caused a higher percentage of infections (15%) than in the United States (6.7%).

Trojan Downloaders

For computers in Europe, the top form of malware was arrival autorun malware that was downloaded via the Internet, and Trend Micro notes that notorious Trojan downloaders are prominent in the Europe data. Multiple-component malware was even more prolific in Latin America, where 73% of malware attacks were dropped by already-present malware.

Trend Micro’s Ferguson advises enterprises to “keep your systems patched—and that doesn’t just mean the operating system, but also third-party components, including QuickTime, Adobe Flash, Java, and Adobe Reader, among others.” Ferguson also says it’s essential that enterprises remind workers to not open unsolicited email, keep their antivirus updated, and use common sense.

by Nathan Lake

CMS Products’ Encrypted Hard Drives Provide New Levels Of Data Integrity

CMS Products ABS-Secure Notebook Backup Solution

The ABS-Secure is the latest in the CMS Products line of external USB 2.0-encrypted disk solutions, with capacities starting at 80GB. The unit utilizes CMS Products’ CE-Secure Full Disk Encryption software for complete management of the encryption environment. Weighing only seven ounces, the ABS-Secure is bus-powered for transportability and is ultrarugged with the inclusion of the CMS DataGuard shock-absorbing wrapper.

The ABS-Secure is ready to use right out of the box. As the entire disk is pro-

tected with AES 256-bit encryption, users can be confident that all data on the ABS-Secure is safe and can be accessed only by its rightful owner.

The ABS-Secure includes CMS Products’ BounceBack Express Version 8.0 backup and restore software. Recently released, Express 8.0 is the successor to the earlier award-winning BounceBack software. Sporting a new, straightforward, and intuitive interface, Express 8.0 is the perfect complement for imple-

menting data backup to the encrypted ABS-Secure.

- AES 256-bit encryption/decryption
- Full-disk encryption by CE-Secure
- Pre-encrypted for easy operation
- Transportable from system to system
- Bus-powered, USB 2.0 interface
- Shock protected
- Three-year warranty
- Includes BounceBack Express backup and restore software
- Includes copy2go Xpress multimedia software

CMS Products ABS-Secure Notebook Backup Solution provides backup security with removable disk drives available in four capacities ranging from 80 to 320GB.

Starts at \$193

(800) 327-5773

www.cmsproducts.com



Windows 7 & User Account Control

How Much Control Is Enough?

by John Brandon

HOW MUCH CONTROL should users have over their own desktops? This is a question that data center admins—especially those in small to medium-sized enterprises—have been asking ever since Windows Vista started shipping. The main issue: With User Account Control features, end users are stuck in an uncomfortable middle ground. They cannot install applications they really need without admin privileges, and yet having those admin rights means they can install anything, including programs that steal private business data and other malware that hampers productivity.

In 2006, IDC released a report that said these security issues were causing undue headaches in IT—up to eight calls per year, per user, having to do with access control issues. For each user, the costs associated just with security privileges is \$120 per user per year. Now, with new announcements about “slider controls” for end users in Windows 7, there is another dark cloud forming on the horizon. Will UAC rear its ugly head again and force SMEs to rethink their security practices?

Windows 7 is the successor to Windows Vista, an OS release that promises to fix most of the major annoyances in Vista without adding any major new features. New UAC slider controls are designed to alleviate the tedium of access control—a feature that, in Vista, became a major letdown. One of the prime offenders is Apple iTunes, which prompts users umpteen times to approve the installation. In Windows 7, these prompts will be customizable: You will only see an alert when a software install affects the system Registry or when the application was downloaded from the Internet. Still, for IT, the sliders present the same challenges in giving users control over admin rights.

Keep The Right People In Control

“Asking enterprises to give end users the decision-making process to what is elevated and what is not is a decision that is best left to the IT back office, not to front-line workers, such as call center managers, engineers, and business units,” says John Moyer, CEO of BeyondTrust (www.beyondtrust.com), a company that offers security products for IT management. “UAC tells organizations that

they should use the admin account when in actuality it means admin accounts are scattered and unmanaged.”

According to Moyer, the UAC features in Windows 7 are no cause for alarm, because there’s a way of dealing with the features in Vista and in Windows 7: Offload the security practices to another software agent to manage admin accounts. This “best of both worlds” approach means the end user can install applications as needed, but is blocked from installing harmful software, and the end user does not have to manage his own security access at all—a cumbersome chore.

Interestingly, even Microsoft appears to agree that UAC was—and could still be—a problem.

“Microsoft recognizes that to help create a secure, auditable, and compliant enterprise environment, all users should be standard users and ideally not have administrative privileges or access to administrator passwords,” says Austin

and an issue of compliance with security regulations. Yet, there is a small staff that is often not equipped to handle admin credentialing. Users call to request admin rights to install a widget or a new programming tool. These are tools to do their jobs, but they create support issues nonetheless. Each new install means drifting from a standard config, creating potential conflicts with other apps, deploying people to fix the problems that arise, and dealing with the resulting downtime for each user.

Moyer recommends that IT staff keep in tune with Windows 7 updates to see if the plan for UAC changes. TechEd is a good resource, as are some of the Windows 7 blogs from Microsoft developers. (The Windows 7 blog at blogs.msdn.com/e7/default.aspx is one to keep an eye on.) It’s also important to evaluate each release candidate and test UAC sliders to see exactly what kind of control a user can have over the Desktop. As with Vista, Microsoft will likely have an aggressive release schedule planned—and change the exact roll-outs—so

There needs to be some built-in controls for user credentials, especially for home users and the SME market.

Wilson, Microsoft Windows Client Security product management director.

Home vs. Business

One of the issues that UAC fails to deal with is the fact that Windows is designed for both business and home use. That likely won’t change in Windows 7, and if anything the product will be simplified with fewer product SKUs. One common complaint with Vista was that there were too many versions.

“Microsoft had a lot of negative feedback about prompting,” says Moyer. “The question was whether these users needed to do these activities, to be prompting for requests for admin credentials. It led to phone calls to the help desk requesting admin credentials. End users should not be making security decisions. Then there is the general concept of eliminating admin rights, but there is a negative of providing passwords—there’s a risk and compliance issue of understanding who is doing what to the machine with different credentials and who is currently logged on as the user.”

Moyer says that smaller companies sometimes feel that each person can manage his or her own workstation, but that is a major risk

it’s important to keep pace with these advances as the Windows 7 release date looms.

For Microsoft, UAC is a sticky subject. There needs to be some built-in controls for user credentials, especially for home users and the SME market. In a larger enterprise—those above just a few employees but smaller than a 1,000-employee enterprise—tools for remotely managing UAC make more sense, because it means fewer support calls and less Desktop management.

Windows 7 UAC Changes

Microsoft will likely provide sliders for users to control application installations. For example:

- Blocking an application that will change the Registry
- Blocking an application obtained from the Web (Max OS X already does this)
- Blocking an application that is known as a malware client
- Blocking applications that access the Internet

Intel Prepares 32nm Technology

Intel says it will manufacture 32nm chips at the end of next year if production goes according to schedule. As part of the Westmere line, 32nm will be the next phase in the transition from 45nm technology. This product follows the “tock” phase of Nehalem microarchitecture as it “ticks” its way to a smaller size and advanced performance. The phase will also update memory and multicore power management. The 22nm family, known as Ivy Bridge, is slated for arrival in 2011.

Report: Better U.S. Nanomaterials Strategy Needed

The government doesn’t have a good enough plan for research into whether nanomaterials are safe for people and the environment, says a committee report from the National Research Council. Although the current plan from the National Nanotechnology Initiative highlights the research efforts of various federal agencies, it doesn’t describe the known risks thus far, according to the report. Also missing from the plan is a cohesive strategy with research goals into the health and safety aspects of nanomaterials, which would facilitate their entry into society as safe and innovative products.

Cisco Releases Security Report

Cisco released its 2008 Annual Security Report, and the news is as you would expect. Criminals are exploiting online security flaws quicker than ever. Threats from legitimate domains, such as those infected with iFrames, nearly doubled. Virtualization product vulnerabilities nearly tripled, and botnets continued to grow as a threat. Insider access and increasingly wily social engineering accounted for much theft and malware infection. Despite a drop in malware propagated by attachments, troubling email concerns included targeted phishing attacks, the United States’ lead in spam generation (17.2%), and a 90% overall spam rate.



Free Software Foundation Sues Cisco

The Free Software Foundation, a group that promotes open-source software, has sued Cisco, claiming that the company’s Linksys routers violate the terms of the GNU General Public License version 2 and the GNU Lesser General Public License. The licenses restrict the ways in which an open-source product can be commercially used and distributed. The Free Software Foundation says that Cisco’s Linksys brand routers use both GNU Compiler Collection and GNU Binutils, to which the FSF holds copyrights. Although Cisco bought Linksys in 2003, the FSF says that Cisco failed to provide users with access to the source code for open-source software embedded within certain products.

PROCESSOR®



Subscribe Today!
Call (800) 819-9014

or

Subscribe Online!
Go to www.Processor.com

How To

Figure Out The Right Height For Raised Flooring

A Floor That Is Too High Or Too Low Can Compromise Airflow Functions

by Sixto Ortiz Jr.

• • •

TO UNINFORMED OBSERVERS, A data center may appear to be one of the more hum-drum elements of data center operations. However, most savvy data center administrators know that the raised flooring can be an important piece of the cooling and airflow puzzle. Figuring out the correct height for a raised floor is essential to the success of cooling and airflow functions necessary for keeping servers humming and enterprises running.

Equipment housed in a data center with properly calibrated cooling and airflow will generally suffer fewer inexplicable failures and malfunctions, while equipment housed where temperature and airflow are hard to control could cause more problems.

The Floor Function

A raised floor is an integral part of the airflow and cooling functions that are so vital to maintaining a well-run data center. Lior Blik, CEO and president of NITConnect (www.nitconnect.net), says cooling is generated from under the floor to the front of the rack. Cold air comes up through the raised floor, cools the front of the servers, and replaces warm air from the back of the servers.

Even though the primary benefit of a raised floor at the proper height is improved airflow and hardware cooling, there are other considerations. For example, Scott

Coll, president of Commercial Flooring Systems (commercialflooringsystems.com), says a correct floor height can mean the difference between a quiet or noisy data center.

“If you are funneling airflow under the raised flooring and the duct is too small,” Coll says, “there will be noise problems as air pushes through the smaller space.” One way to alleviate this problem, he adds, is to use perforated panels that give the high-velocity air another escape route.

Randall Hayter, director of technical operations for Lee Technologies (www.lee technologies.com), says floor height is determined primarily by the volume of air needed to cool the data center at design density along with the under-floor static pressure needed to deliver that air to all areas requiring cooling.

“Compromises must sometimes be made when dealing with an existing structure,” he adds, “but, in general, the floor should be built to the designed height.”

Before You Start

The first question administrators should ask before determining the correct height for a raised floor is whether a raised access floor is necessary, says Hayter. In fact, he adds, for many data center administrators considering a new facility, the answer has been no. Alternatives such as concrete slabs with in-row cooling or overhead ducted supply and return, he says, are attractive alternatives to raised access flooring.

“This question should be considered early in the requirements phase of the project as it directly impacts many basic design decisions,” says Hayter. If a raised access floor is required, administrators must keep in mind the fact that its primary function is to provide a flexible system for delivering cool air to data center equipment, wherever you place the equipment.

Coll says administrators exploring the use of a raised access floor should “understand the dynamics of a data center.” He adds that determining the weight load of equipment is also a crucial consideration in the overall budgeting of the project.

NITConnect’s Blik says the industry standard is to have data center floors raised 18 inches from the ground. But, he says the height determination depends on the number of servers and the amount of space you need to cool.

For example, to generate cooling for 50 or more racks, Blik’s company would recommend a floor height of 24 inches or more. In fact, he says some data centers will construct their floors at 30 to 40 inches to allow for more room under the floor, letting personnel manage the cooling from there.

The Raised Floor Toolkit

Because a raised access floor is such a critical component of a data center’s cooling and airflow function, tools that enable administrators to model airflows under different conditions are essential to success. Hayter says CFD (computational fluid dynamics) is a useful computer modeling tool that lets an engineer predict airflow delivery at design time.

“Using a CFD model,” he says, “the effect of using different air handling unit configurations, tile perforations and placements, floor height, placement of air handlers, under-floor blockages, redundant unit operation for failover, and similar variables can be predicted and controlled.”

If a CFD is not available, says Hayter, engineers and administrators can determine a floor height based solely on flow calculations. But, he warns, if you are using flow calculations alone, prepare to experiment with perforated floor tile flow rates to get the airflow right.

Coll says administrators should focus their efforts on creating a raised floor

Key Points

- Raised flooring is an absolutely essential component of appropriate airflow and cooling in a data center.
- Modeling tools, such as CFD (computational fluid dynamics), can help administrators determine the right floor height by enabling the modeling of airflow under various conditions.
- A floor height that’s too low or too high can have dire consequences for airflow and cooling in the data center.

master plan. In fact, he says the room’s ceiling height, door clearance, and ramp access should all be considered before construction begins.

Potential Pitfalls

So, what potential pitfalls should be avoided when considering the proper height for a raised floor? For starters, Hayter says if the floor height is too low, air speed under the floor will need to be high in order to transport enough air to the equipment. This fast-moving air can cause a pressure drop on the underside of the perforated tiles, which on the extreme end can cause air to flow down rather than up.


Conversely, he adds, if the floor height is too high, the air-handling equipment will have to work harder to compensate for low air velocity to build the static pressure needed for proper air delivery.

Blik says decreased or minimized raised floor height can cause cold air pockets to build under the floor, essentially creating an air blockage for air trying to move up.

Jill Eckhaus, CEO of AFCOM (www.afcom.com), says one key item to consider is the seismic zone that the data center is located in, because this will impact the stability of your data center.

The Bottom Line

The correct height for a raised floor is a vital component of a properly cooled data center. This seemingly mundane decision impacts a data center environmental concern: keeping hardware cool and air moving. As data centers evolve and increasing amounts of hardware gets crammed into place, this consideration will only grow in importance.

As Hayter points out, choosing raised access flooring height is a decision that can’t be made in a vacuum. It is an integral part of the overall engineering process, so the calculations to determine proper floor height must be part of the overall project engineering scope. 

TOP TIPS

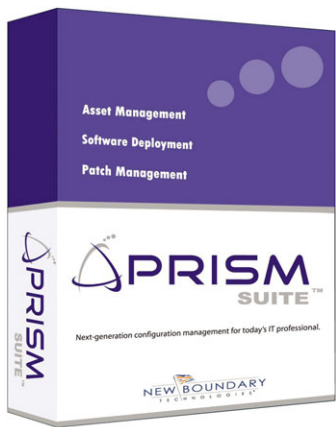
Mitigate the rat’s nest—The space under a raised floor often houses the seemingly endless feet of cable needed for any good-sized data center. But, a large amount of unorganized cabling can cause airflow blockages.

Room to grow—Jill Eckhaus, AFCOM CEO, says administrators should consider accessibility for expansion when designing a raised floor to ensure there is enough real estate for cooling, cabling, and so on.

Consider cabling runs—Even the manner in which cabling is arranged under the floor can be a critical factor. For example, says NITConnect’s CEO and President, Lior Blik, administrators should make sure cables are run closer together, which lets the cool air rise.

NETWORKING & VPN

NOVEMBER 7, 2008



New Boundary Technologies Prism Suite 9.0 offers robust, safe, and seamless Windows system management for any location.

Starts at \$61.20 per seat for 100 seats

(800) 747-4487

www.newboundary.com



Reduce Windows Configuration Complexity

New Boundary Technologies Prism Suite 9.0

Every Windows administrator is looking for new ways to make Windows configuration more manageable and efficient. All too often, however, the tools and programs designed to simplify the Windows configuration process only add complexity and headaches.

New Boundary Technologies’ Prism Suite 9.0 helps reduce the complications associated with Windows configuration. New Windows configuration management features allow for se-

cure, Internet-based administration of mobile workforces and remote locations, resulting in better functionality and performance. In addition, Prism Suite 9.0 has been designed to spread out the deployment of software and configuration responsibilities to enhance performance and conserve bandwidth.

Prism Suite 9.0 also offers a client/server architecture and modular design to automate and simplify processes inside IT departments or via

a managed service provider or software as a service models.

Corporate IT departments will benefit from the inclusion of effective, dependable packaging of 64-bit software programs, allowing large, 64-bit software programs to be deployed faster. Prism Suite 9.0 also includes added support for WMI (Windows Management Instrumentation), so Windows administrators can be more accommodating when grouping systems for management tasks.

Best Practices In Implementing A New OS

• • •

Information is updated regularly, so be sure to check back often!

Unified Bandwidth Management

XRoads Keeps Your Network's Lifeblood Flowing

by Holly Dolezalek
• • •

AS ENTERPRISES USE the Internet for more and more functions—software as a service, voice over IP, CRM, remote accounting—bandwidth is looking less like a business-critical function and more like lifeblood. So naturally, a connection failure is more than just an inconvenience; it's a heart attack.

That urgency has driven many companies to look for more reliability and bandwidth by aggregating a secondary link with an existing T1 line or other connection. Aggregating this way creates a sort of insurance for the company, which benefits from having a higher-performing connection that also has a backup if it goes down.

Clearing Network Arteries

Some experts from ISP backgrounds decided that preventing those heart attacks, which can cost companies thousands of dollars per day, was the perfect niche, and the result was XRoads Networks (949/477-6100; www.xroadsnetworks.com), a privately owned company in Irvine, Calif., that provides bandwidth management to small, mid-sized, and Fortune 500 companies. It offers what it calls unified bandwidth management, which includes not only the aggregation of more than one link but also smart traffic over that connection. Traffic shaping, application prioritization, load balancing, and other technologies all work together so that customers' networks work better and don't fail.

"We provide bandwidth management and reliability by connecting multiple broadband connections," says Daren French, vice president of business development for XRoads. "We do that on the network side by providing hardware appliances and on the services side

with our Zero Outages managed service." The company's customers tend to be in the midmarket range, averaging a couple of hundred to the low thousands of employees. Most have multiple locations, and some have data centers with remote sites attached.

"Our verticals are the financial sector, travel companies, manufacturers with multiple locations, business services, legal, and health groups, such as those with doctors' offices in multiple locations that need to talk to each other," French says.

The company's primary footprint is in North America, but it's active in 25 international regions through distribution and channel partners. Most of its international business comes from Europe and Asia, particularly south Asia, although South America is becoming a good market for the company, as well. More of its international customers are manufacturing companies, but overall, the same verticals apply as in North America.

Hardware & Services

XRoads was founded in 2001, and half of its business comes from its hardware appliances that combine multiple links to provide aggregated bandwidth and failover reliability. Its Edge2WAN platform uses traffic shaping and best path routing for more efficient network sessions. More popular among its hardware is the EdgePRO/XL, which uses seven-layer packet classification, traffic shaping, and network monitoring to manage bandwidth and improve network performance. The company's midsized to enterprise-class customers tend to use its hardware, but for smaller customers, the other half of

XRoads' business is the product of choice: Zero Outages (www.zerooutages.com).

XRoads launched its Zero Outages service at the beginning of this year. Zero Outages has a lot of appeal for small and mid-sized companies, French explains, because it ensures the reliability of their Internet connections for a price they can afford to pay. The service provides load balancing, redundancy, and faster downloads without requiring customers to handle the complicated tasks that come with aggregating Internet connections.

"The BGP protocol has historically been used to provide redundancy, but without load balancing or any additional bandwidth," French explains. "That takes a lot of time to implement, and it requires certain signoffs by different organizations that run



the Internet naming and numbering systems, different hardware, and coordination with different ISPs. It's a cumbersome process, and enterprises only did it because they had to. Midsized organizations aren't going to have the time or patience or resources to do that, but they're starting to need the same reliability as larger companies, and Zero Outages is a turnkey way to deploy this kind of redundancy in a cost-effective way."

The appeal for both sides, both hardware and services, and of bandwidth management in general is that it offers two benefits, French says. By aggregating connections, customers get failover redundancy that ensures their Internet access at all times. But they also get the advantages of networks that operate more efficiently as a result of that redundancy. "They're not just getting reliability and redundancy, they're also going to be able to fully use the link

they're paying for when it's not needed for redundancy," he says.

Future Directions

The company's main focus for now is growing its Zero Outages business. "By expanding our product mix to offer services on top of the hardware platform, our goal was to make it as easy as possible for our customers to take advantage of our technology," French says. "We've proven that it works and [have] built an initial customer base, and we're evaluating how to proceed from here based on what kind of growth we think we can get." XRoads sees reasons to be optimistic about the potential for Zero Outages. Industry-wide, French says, there's been 40 to 50% growth in the market for bandwidth management, and expectations are for 70 to 80% growth in the Zero Outages customer base in the next year.

"With only a year of experience so far, there are plenty of things for us to work on and improve on the service side," French says.

But they won't be ignoring the hardware side. French says the company's hardware is mature but that it will be working on enhancements or refinements based on what customers have been most interested in seeing. "We'll be focusing on new features or enhancements that are likely to return the greatest margin for us while adding the greatest benefit for our customers," French says. For most of XRoads' customers, he adds, the most interest seems to be in the area of the interface, and the company will launch a new release of that interface next year. The interface upgrades will include a new Web 2.0 interface with improved and expanded reporting capabilities.

"In an uncertain economy, there are always challenges to maintain growth and improve upon previous growth numbers," French says. "This year, we'll get a good sense of where we can drive this next." ■

THREE QUESTIONS

Create A Virtual SMP System

ScaleMP Can Help With Standard Server Aggregation

by Julie Sartain

FOUNDED IN 2003, **SCALEMP** is a leader in virtualization for high-end computing environments and, with its vSMP Foundation, aggregates multiple industry-standard x86 systems into a single virtual system that delivers a high-end symmetric multiprocessor, or SMP, computer. This aggregation platform creates a single virtual system ranging from four to 32 processors (128 cores) with up to 4TB of shared RAM. In addition, it's optimized for compute- and memory-intensive workloads, which makes it the ideal platform for the HPC (high-performance computing) market.

We talked to Shai Fultheim, founder and CEO of ScaleMP (www.scalemp.com) and architect of the core technology. Fultheim was previously the CTO of BRM Capital, a first-tier Israeli venture capital firm, and before that he was the co-founder, CTO, and vice president of R&D at several technology startups.

■ What are the biggest IT-related issues facing today's small to midsized enterprise?

"The two biggest IT-related issues facing small to midsized enterprises are cost and complexity," says Fultheim. Businesses today are operating on tight IT budgets, and they lack the luxury of elaborate IT skills and infrastructure. Com-plexity adds to this cost, and that impacts the productivity of the end-user community within these organizations.

"What companies need are cost-effective plug-and-play solutions," adds Fultheim. ScaleMP focuses on the HPC segment of IT, and within this segment, the issues are the same. And although the industry has made huge strides toward reducing the cost of HPC systems in the past five years, the complexity issue remains. The two key reasons for this are a lack of in-house IT skills with HPC systems (clusters) and cost constraints for adopting higher-end, more expensive shared-memory systems optimized for HPC.

In other words, some customers could benefit by using larger, more

powerful servers to run their simulations and virtual prototyping and models. This would result in better-quality designs for their products under development and shorter development cycles (faster time to market). However, because of the complexity and cost associated with larger systems (either large SMP machines, which are expensive, or clusters, which are hard to implement and manage), they end up not upgrading their servers. This limits their ability to run the more complex, larger models and simulations.

■ What should *Processor* readers know about your company's products?

ScaleMP is the first and only company to create a virtual SMP system from standard server aggregation, says Fultheim. Aggregation is a virtualization technique that combines multiple physical systems into a single virtual system. The building blocks for this approach are the same low-cost commodity x86 server nodes used in clusters, preserving their low cost. In addition, the single virtual system runs a single instance of the operating system and takes advantage of large

contiguous memory and unified I/O architecture.

For workloads that require large, contiguous memory, customers have traditionally used the scale-up and proprietary systems approach. Aggregation provides a cost-effective alternative to buying expensive and large proprietary shared-memory systems for such workloads. It enables an application that requires large amounts of memory to leverage the memory of multiple systems and reduces the need to use a hard drive for swap or scratch space.

■ What makes your company unique?

"Reduced installation time and complexity," says Fultheim. ScaleMP has developed application guidelines for deploying systems enabled by vSMP Foundation. This system (for HPC users) delivers the high-performance simulation power required by the most demanding environments. It can be installed at the customer site in minutes, and the system can be up and running in a very short time, which allows designers and engineers to be productive and run simulations immediately.

What Are You Looking For?

If you don't see it in [Processor](#) or at www.Processor.com, let us know.

We'll help find it for you. (800)247-4880
feedback@processor.com



PROCESSOR

GPS



GLOBAL PRINTER SERVICES

INCORPORATED



HP LJ 4250N
\$595



HP LJ 5035XS
\$2395



HP LJ 4300
\$395

The Resellers Resource

All printers include parts and labor warranty. This is only a small sample of what we have in stock. Please call for price and availability for other models, accessories and parts.

Over 150 different HP LaserJet printer models in stock!

Buy your HP laser printers from the industry leader. When you purchase a printer from GPS you are buying the best refurbished printers available. We offer a one year warranty on printers and free technical support for the life of the printer. We can provide you with a specific model you are looking for or one of our experienced staff can help you select the printer that will best meet your needs. Your satisfaction is our number one priority, so if you are not completely satisfied with your purchase you can return your printer for a full refund.

Resellers Welcome.

#1 Source for Printers

800-588-3554 • 608-268-4300
www.globalprinter.com • Free Tech Support

WE BUY AND SELL




VECMAR
Computer Solutions
www.vecmar.com



- Wyse and HP Thin Clients
- Wyse, Link, ADDS, and Digital/Boundless Dumb Terminals
- OKI Impact Printers
- TallyGenicom and Printronix Line Printers
- Label Printers
- Digital Check and Panini Check Scanners

Go Green with remanufactured equipment!

email: sales@vecmar.com
Call Toll-free 800.457.8499



Pegasus Computer Marketing, Inc.
(800) 856-2111
www.pegasuscomputer.net
Specializing in POS/Barcode marketing and hardware maintenance.

Over the past 20 years Pegasus Computer Marketing has evolved from a marketing company for mainframe terminals to providing both sales, maintenance, and flat rate repair for POS, barcode hardware of all makes and models, wireless and networking peripherals, laser printers, and flat panels just to name a few. PCM currently carries several large contracts with major retailers from POS units to handheld scanners, vehicle computers to access points and related peripherals. PCM can tailor flexible contracts to cover any client requirements. To ensure the quality of our products and services we offer only depot maintenance.

Customer tailored secure Web-entry for RMA requests and instant RMA numbers.

References available upon request.

Point of Sale
Barcode
Wireless
Networking
Laser Printers
Flat Panel
Thermal
Dot Matrix
Handheld Scanners
Vehicle and Handheld Portable Computers
Sales/Service
Depot Maintenance
Kronos TimeClocks

Magnext Ltd

7099 Huntley Rd, Suite 104
Columbus, OH 43229



DATA BACKUP SOLUTIONS

NEW & REFURBISHED TAPE & HARD-DISK BASED BACKUP SOLUTIONS
LIBRARY UPGRADE PACKAGES FOR HIGHER PERFORMANCE & CAPACITY
TAPE LIBRARY REPAIR SPECIALISTS - STOCK 1000'S OF PARTS

HP SPECIALS

• HP MSL4048 (AG324A) Tape Library, 1x-LTO3 FC Drive (NEW with HP warranty)	\$7,900
• HP MSL6030 (AD6070B) Library, 2x-LTO3 Drives (Refurbished chassis w/Magnext warranty; New Drives w/HP warranty)	\$9,600
• HP MSL6030 (AJ030A) Tape Library, 1x-LTO4 FC Drive (Refurbished chassis w/Magnext warranty; New Drive w/HP warranty)	\$14,500
• HP MSL6060 (AJ031A) Tape Library, 2x-LTO4 LVD SCSI Drives (Refurbished chassis w/Magnext warranty; New Drives w/HP warranty)	\$22,500
• HP VLS6510 Virtual Library (AF729A) 10 TB usable/comp. 2:1 (NEW with HP warranty)	\$25,200
• HP 1/8 Autoloader (AA927A), 1xLTO2 LVD SCSI Drive (Refurbished chassis and drive w/Magnext warranty)	\$1,295
• HP (C7974A) LTO4 Ultrium RW Data Cartridge, 800 GB/1.6 TB (NEW)	\$62.45

Committed to providing high-value, high-quality, products to the IT marketplace

Toll-free 888-NOW-TAPE 614-433-0011
www.magnext.com info@magnext.com



Digital Brothers Group
DEC-Compaq-Cisco-Sun-SGI

770-931-7732
Fax 770-931-9416
www.dbgweb.com
salesp@dbgweb.com

AlphaServer GS160 Model 16

Base System for OpenVMS

- DY-160CG-AA
- One Alpha 21264 Processor 1224 MHz
- Four Quad Building Blocks
- One 14-Slot PCI Shelf
- OpenVMS Operating System License

ALSO AVAILABLE:

- Additional 1224 MHz CPU w/SMP
- Additional Memory
- Additional PCI Shelves
- Additional PCI Options

Call or E-Mail For Pricing

2 SYSTEMS IN STOCK!

Authorized **COMPAQ** Reseller

WE WILL BUY YOUR USED HARDWARE!

Need an affordable cluster solution?
Go pre-owned, and save!



STALLARD TECHNOLOGIES, INC

Dell PowerEdge 850

DELL 42U RACK with 34 SERVERS

42U Rack w/ QTY 34 PE850's, each featuring:
CPU: 64 Bit Pentium D/830 Dual Core 3.0GHz
2MB Cache / 800MHz Front Side Bus
RAM: 2GB, 533MHz, DDR2 Memory (2 x 1GB)
HDD: 2 x 160GB SATA 7200RPM Hard Drives
Fully Loaded Racks, Professionally Cabled,
Just plug it in, Fire it up, and it's Ready to Go!
(w/ 34 Servers, all PDU's & 48-Port Switch)

\$9,999
call for freight quotes

Server-Only 5-Packs Available \$1,249

QTY 10: \$2,299

In today's economy, why buy new?

Call Toll Free 1-877-851-2260 Browse our entire inventory at WWW.STIKC.COM



E.L.I.

Call for a Quote Today!

- Quick Shipping
- In-house Technical Staff
- International Shipping

Phone 800-447-1156
617-547-4005
Fax 617-354-1417
E-mail sales@eli.com

288 Norfolk Street
Cambridge, MA 02139

For our complete online catalog go to www.eli.com

SUN MICROSYSTEMS

Sun Fire
Sun Blade
StorEdge
3310/3510 Array
Sparcs
CPUs
Drives
Memory
Entry/Midrange Servers

DEC/HP

Alpha
DecServers
Comm. Gear
VAX
Memory/Disks

CISCO

Routers
Catalyst Series Switches
Network Modules
Pix Firewalls
Port Adapters
VPN+ Security Product

www.ccny.com



Computer Connection

of Central New York, Inc.

For all your IT Network & Security Needs

BUYS / SELLS / TRADE-IN / SERVICE / NEW / USED



800-566-4786

purchasing@ccny.com sales@ccny.com



COMPUREX SYSTEMS CORPORATION

Serving the IT Industry for 20 Years

(800) 426.5499 TOLL FREE
(508) 230.3700 LOCAL
(508) 238.8250 FAX
info@compurex.com
www.compurex.com

WANT TO BUY

- HP • COMPAQ • DEC
- OFF-LEASE
- SURPLUS/EXCESS
- END OF LIFE



BUY • SELL • LEASE • RENT • REPAIR

FREE SHIPPING!



PaceButler corporation

We Buy Used Cell Phones

& pay up to **\$50** for each phone!

Some phones have no value. See current purchase price list for individual model prices at www.pacebutler.com

www.pacebutler.com
1-800-248-5360 • (405) 755-3131



ITT

Information Technology Trading

Ph: (877) 715-3686
Fx: (405) 715-3682
www.itechtrading.com

- We Buy, Sell and Lease IBM
- AS/400 • RS/6000 • Servers
- System Upgrades
- Advanced 36 Systems
- Tape Subsystems
- Printers, Terminals, Modems
- 21 Years Experience



We Also Buy All Other Brands of Computer Hardware!

WE BUY TAPE!

DLT-LTO-AIT-AME-DDS-QIC-3480-3590-9840-Etc.

New & Used - All Types of Data Tape Media
Certified DATA DESTRUCTION Assured

World's #1 Tape Buyer is The Data Media Source
Highest values paid - Free pick-up at your site
1-800-252-9268 www.datamediasource.com